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NBS TECHNICAL NOTE 524

Determination of the Light Elements in Metals: A Bibliography of Activation Analysis Papers

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G. J. Lutz, Editor

Analytical Chemistry Division
Institute for Materials Research
National Bureau of Standards
Washington, D.C. 20234

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PREFACE

This bibliography is the second of a series of bibliographies on the application of Activation Analysis to specific subjects. The bibliographies in this series are produced from the master files of the Analytical Chemistry Division's Activation Analysis Information Center and will be periodically updated.

W. Wayne Meinke, Chief
Analytical Chemistry Division

DETERMINATION OF THE LIGHT ELEMENTS IN METALS: A BIBLIOGRAPHY OF ACTIVATION ANALYSIS PAPERS

G. J. Lutz, Editor

References to the Determination of the Light Elements in Metals using Activation Analysis are indexed according to the elements boron, carbon, nitrogen, oxygen, phosphorous, silicon and sulfur. The indexes are arranged by Element Determined and subdivided according to Matrices and Nuclear Reactions involved. An Author Index is included.

Key words: Boron; carbon; light elements; metals; nitrogen; oxygen; phosphorous; silicon; sulfur.

INTRODUCTION

This publication, Determination of the Light Elements in Metals: A Bibliography of Activation Analysis Papers, is the second in a series of specialized bibliographies on Activation Analysis prepared by the Analytical Chemistry Division Activation Analysis Information Center.

Publications obtained by the Center for inclusion in the Activation Analysis file are indexed according to the broad categories of Element Determined, Matrix Analyzed and Technique Used. Currently there are 106 descriptive terms under Matrix Analyzed and 53 under Technique Used.

Items included in this bibliography were extracted from the Elements Determined: Boron, Carbon, Nitrogen, Oxygen, Phosphorous, Silicon and Sulfur and from the appropriate keys of Matrix Analyzed dealing with metals. The form of the indexes is by Element Determined with listings of Matrices and Nuclear Reactions involved.

An author index has been included and it is hoped that readers will point out omissions to the editor. The Center plans to publish revisions to this bibliography commensurate with the growth of the field.

DETERMINATION OF LIGHT ELEMENTS IN METALS - ACCESSION NUMBERS

4 ALBERT, P.
APPLICATION OF RADIOELEMENTS TO THE PURIFICATION OF ALUMINUM AND OF IRON,
SERIE A, NO 2928, NO D ORDRE 3799, THESES, MASSON ET CIE, EDITEURS, PARIS, 72P., 1956 (FRENCH), FACULTY OF SCIENCES, UNIVERSITY OF PARIS,

8 ALBERT, P. * CHAUDRON, G. * SUE, P.
MICRODETERMINATION BY CHEMICAL MEANS OF CARBON IN DEUTERON IRRADIATED IRON,
BULL. SOC. CHIM. FRANCE, C97-C102 (1953) (FRENCH), CENTRE D ETUDES DE CHIMIE METALLURGIQUE, VITRY SUR SEINE, FRANCE,

22 ATCHISON, G.J. * BEAMER, W.H.
DETERMINATION OF TRACE IMPURITIES IN MAGNESIUM BY ACTIVATION ANALYSIS,
ANAL. CHEM., 24, 1812-1815 (1952), (ENGLISH), THE DOW CHEMICAL CO., MIDLAND, MICHIGAN.

45 BEARD, D.B. * JOHNSON, R.G. * BRADSHAW, W.G.
RADIOACTIVATION OF OXYGEN AND CARBON IN BERYLLIUM,
LMSD-5065, 20P., AUG. 1958, (ENGLISH), NUCLEAR PHYSICS DEPT., RESEARCH AND DEVELOPMENT BRANCH, LOCKHEED AIRCRAFT CORP., SUNNYVALE, CALIF.

46 BEARD, D.B. * JOHNSON, R.G. * BRADSHAW, W.G.
PHOTON ACTIVATION MEASURES OXYGEN, CARBON IN BERYLLIUM,
NUCLEONICS, 17, 90-94, 96 (1959), (ENGLISH), LOCKHEED AIRCRAFT CO., PALO ALTO, CALIF,

49 BRADSHAW, W.G. * JOHNSON, R.G. * BEARD, D.B.
BERYLLIUM ANALYZED FOR TRACE IMPURITIES BY GAMMA-RAY ACTIVATION,
LMSD-288231, 27P., JAN, 1960, (ENGLISH), LOCKHEED AIRCRAFT CORP., MISSILES AND SPACE DIV., SUNNYVALE, CALIF.

58 GILMAN, A.R. * ISSEROW, S.
ANALYSIS OF OXYGEN IN BERYLLIUM,
NMI-1234, 25P., MAY 3, 1960, (ENGLISH), NUCLEAR METALS INC., CONCORD, MASS,

81 BROOKSBANK, W.A., JR. * LEDDICOTTE, G.W. * REYNOLDS, S.A.
DETERMINATION OF TRACE ELEMENTS IN TITANIUM BY NEUTRON ACTIVATION ANALYSIS.
ANAL. CHEM., 28, 1033-1035 (1956). (ENGLISH).
ANAL. CHEM. DIV., ORNL, OAK RIDGE, TENNESSEE.

102 CHAUDRON, G.
CONTRIBUTION TO THE PROBLEM OF LAST TRACES OF IMPURITIES IN METALS.
BULL. SOC. CHIM. FRANCE, 419-422 (1954). (FRENCH).
LABORATOIRES DE VITRY DU C.N.R.S., FRANCE.

105 MAHONY, J.D.
REACTIONS OF HE-3 WITH LIGHT ELEMENTS APPLICATIONS TO ACTIVATION ANALYSIS.
UCRL-11780 (PH.D. THESIS), 62P., JANUARY 1965.
(ENGLISH). UCRL, BERKELEY, CALIF

108 COLEMAN, R.F. * PERKIN, J.L.
THE DETERMINATION OF THE OXYGEN CONTENT OF BERYLLIUM METAL BY ACTIVATION.
ANALYST, 84, 233-236 (1959). (ENGLISH). UK AEA, AWRE, ALDERMASTON, BERKS, ENGLAND.

109 COLEMAN, R.F. * PERKIN, J.L.
APPARATUS FOR THE ROUTINE DETERMINATION OF THE OXYGEN CONTENT OF BERYLLIUM METAL BY ACTIVATION.
ANALYST, 85, 154-155 (1960). (ENGLISH). UK AEA, AWRE, ALDERMASTON, BERKS, ENGLAND.

118 CURIE, I.
DETECTION AND ANALYSIS OF CARBON IN STEEL BY INDUCED RADIOACTIVITY
J. PHYS. RADIUM, 13, 497-498 (1952). (FRENCH).
LABORATOIRE CURIE DE L INSTITUT DU RADIUM DE PARIS.

119 CURIE, I.
DETECTION AND DETERMINATION OF CARBON IN STEEL BY THE USE OF ARTIFICIAL RADIOACTIVITY.
BULL. SOC. CHIM. FRANCE, C94-C97 (1953). (FRENCH).
LABORATOIRE CURIE DE L INSTITUT DU RADIUM DE PARIS.

131 ANDERS, O.U. * BRIDEN, D.W.
TRACE OXYGEN DETERMINATION IN CESIUM METAL AND THE PROBLEM OF RECOILS FROM THE ATMOSPHERE DURING FAST-NEUTRON ACTIVATIONS.
ANAL. CHEM., 37, 530-533 (1965), (ENGLISH), RADIOCHEMISTRY RESEARCH LABORATORY, THE DOW CHEMICAL CO., MIDLAND, MICH.

140 SOCIETA RICERCHE IMPIANTI NUCLEARI
DETERMINATION OF TRACE-ELEMENTS IN IRON SAMPLES BY NEUTRON-ACTIVATION TECHNIQUES.
EURAEC-1273, NOVEMBER 1964, (ENGLISH), SOCIETA RICERCHE IMPIANTI NUCLEARI, MILAN, ITALY.

161 FOSTER, L.M. * GAITANIS, C.D.
DETERMINATION OF PHOSPHORUS IN ALUMINUM AND ALUMINUM OXIDE BY RADIOACTIVATION ANALYSIS.
ANAL. CHEM., 27, 1342-1344 (1955), (ENGLISH), ALUMINUM RESEARCH LABORATORIES, NEW KENSINGTON, PA.

181 GILL, R.A.
PROTON ACTIVATION ANALYSIS IN THE DETERMINATION OF SUBMICROGRAM AMOUNTS OF BORON IN SILICON.
AERE C/R 2758, 25P, (1958), (ENGLISH), UK AERE, HARWELL, BERKSHIRE, ENGLAND.

223 HERR, W.
TRACE ANALYSIS WITH RADIOACTIVE ISOTOPES. ACTIVATION ANALYSIS OF PHOSPHORUS IN IRON.
ARCH. EISENHUTTENWESEN, 26, 523-526 (1955), (GERMAN), MITTEILUNG AUS DEM MAX-PLANCK INSTITUT FUR CHEMIE, MAINZ, GERMANY.

244 JAMES, J.A. * RICHARDS, D.H.
RADIOACTIVATION ANALYSIS OF PHOSPHORUS IN SILICON.
NATURE, 176, 1026 (1955), (ENGLISH), RESEARCH LAB., BRITISH THOMSON-HOUSTON CO., LTD., RUGBY, ENGLAND.

246 JAMES, J.A. * RICHARDS, D.H.
RADIOCHEMICAL ANALYSIS OF SILICON.
J. ELECTRONICS AND CONTROL, 3, 500-506 (1957), (ENGLISH), RESEARCH LAB., THE BRITISH THOMSON-HOUSTON CO. LTD., RUGBY, ENGLAND.

255 KANT, A. * CALI, J.P. * THOMPSON, H.D.
DETERMINATION OF IMPURITIES IN SILICON BY NEUTRON ACTIVATION ANALYSIS.
ANAL. CHEM., 28, 1867-1871 (1956), (ENGLISH), AIR RESEARCH AND DEVELOPMENT COMMAND, AIR FORCE CAMBRIDGE RESEARCH CENTER, BEDFORD, MASS.

351 VOIGT, A.F. * ABU-SAMRA, A.
ANALYSIS OF A DAMASCUS STEEL BY NEUTRON AND GAMMA ACTIVATION.
IS-1105, 12P., FEBRUARY 25, 1965. (ENGLISH), INSTITUTE FOR ATOMIC RESEARCH AND DEPARTMENTS OF CHEMISTRY AND NUCLEAR ENGINEERING, IOWA STATE UNIVERSITY, AMES, IOWA.

391 OSMOND, R.G. * SMALES, A.A.
THE DETERMINATION BY RADIOACTIVATION OF THE OXYGEN CONTENT OF POWDERED METALS WITH PARTICULAR REFERENCE TO BERYLLIUM.
ANAL. CHIM. ACTA, 10, 117-128 (1954), (ENGLISH) (FRENCH AND GERMAN SUMMARIES), ANALYTICAL CHEMISTRY GROUP, AERE, HARWELL, ENGLAND.

398 PLUMB, R.C.
MEASURING TRACE ELEMENTS BY ACTIVATION ANALYSIS.
NUCLEONICS, 14, NO. 5, 48-49 (1956), (ENGLISH), ALUMINUM RESEARCH LAB., ALUMINUM CORP. OF AMERICA, NEW KENSIGNTON, PA.

401 POINT, J.J.
DETERMINATION OF SMALL AMOUNTS OF CARBON IN IRON BY PROTON IRRADIATION.
UNESCO/NS/RIC/48 (PROC. FIRST UNESCO CONF. PARIS, 1957), 8P. (FRENCH), INSTITUT INTERUNIVERSITAIRE DES SCIENCES NUCLEAIRES, CENTRE DE LA FACULTE POLYTECHNIQUE DE MONS, BELGIQUE.

417 RIEZLER, W.
ANALYSIS THROUGH NUCLEAR TRANSMUTATION.
Z. NATURFORSCH., 4A, 545-549 (1949), (GERMAN), AUS DEM PHYSIKALISCHEN INSTITUT DER UNIVERSITAT BONN, GERMANY.

426 FUJII, I. * MUTO, H. * MIYOSHI, K.
DETERMINATION OF OXYGEN IN METALS BY 14-MEV NEUTRON ACTIVATION.
BUNSEKI KAGAKU, 13, 249-254 (1964), (JAPANESE) (ENGLISH SUMMARY), TOKYO SHIBAURA ELECTRIC CO., LTD., KAWASAKI, JAPAN.

452 SHORT, H.G. * WILLIAMS, A.I.
DETERMINATION OF SMALL AMOUNTS OF SILICON IN
HIGH-PURITY IRON.
ANALYST, 83, 624-627 (1958), (ENGLISH), NATIONAL
PHYSICAL LAB., TEDDINGTON, MIDDLESEX, ENGLAND.

500 BROADHEAD, K.G. * HEADY, H.H.
ELIMINATION OF CONTAINER EFFECTS IN ACTIVATION
ANALYSIS.
ANAL. CHEM., 37, 759-760 (1965). (ENGLISH), RENO
METALLURGY RESEARCH CENTER, BUREAU OF MINES, U.S.
DEPARTMENT OF THE INTERIOR, RENO, NEVADA.

509 THOMPSON, B.A. * STRAUSE, B.M. * LEBOEUF, M.B.
GAMMA SPECTROMETRIC AND RADIOCHEMICAL ANALYSIS FOR
IMPURITIES IN ULTRAPURE SILICON.
ANAL. CHEM., 30, 1023-1027 (1958), (ENGLISH).
GENERAL ENGINEERING LABORATORY, GENERAL ELECTRIC
CO., SCHENECTADY, N.Y.

578 ENGELMANN, C.
ON THE UTILIZATION OF PARTICLES FOR THE
DETERMINATION OF OXYGEN AND CARBON.
COMPT. REND., 258, 4279-4281 (1964), (FRENCH),
FRANCE.

596 MC CRARY, J.H. * MORGAN, I.L. * BAGGERLY, L.L.
NEUTRON ACTIVATION ANALYSIS OF OXYGEN IN
BERYLLIUM.
PROCEEDINGS 1961 INTERNATIONAL CONFERENCE ON
MODERN TRENDS IN ACTIVATION ANALYSIS, COLLEGE
STATION, TEXAS, 24-27, DECEMBER 1961, (ENGLISH),
TEXAS NUCLEAR CORP., AUSTIN, TEXAS.

628 KUSAKA, Y. * TSUJI, H.
DETERMINATION OF SILICON IN IRON AND STEEL BY
NONDESTRUCTIVE ACTIVATION ANALYSIS WITH 14 MEV
NEUTRONS.
NIPPON KAGAKU ZASSHI, 86, 733-736 (JULY 1965),
(JAPANESE) (ENGLISH SUMMARY), KONAN UNIVERSITY,
DEPARTMENT OF CHEMISTRY, HIGASHINADA-KU, KOBE-SHI,
JAPAN.

641 EMERY, J.F. * MULLINS, W.T. * BATE, L.C. * LEDDICOTTE, G.W.
TRACE ELEMENT DETERMINATION IN NIOBIUM AND ZIRCONIUM METAL BY RADIOACTIVATION ANALYSIS, NIOBIUM.
TID-7629, 239-243, OCTOBER 1961, (ENGLISH), OAK RIDGE NATIONAL LABORATORY, OAK RIDGE, TENNESSEE.

654 WINCHESTER, J.W. * MEYER, R.E. * BATE, L.C. * LEDDICOTTE, G.W.
DETERMINATION OF OXYGEN IN OXIDE FILMS BY NEUTRON ACTIVATION ANALYSIS.
CF-59-7-128, 6P., JULY 15, 1959, (ENGLISH), OAK RIDGE NATIONAL LAB., OAK RIDGE, TENN.

655 LEONHARDT, W.
DETERMINATION OF SURFACE OXYGEN ON METALS BY ACTIVATION IN THE REACTOR.
ANAL. CHIM. ACTA, 32, 355-369 (1965), (GERMAN) (ENGLISH AND FRENCH SUMMARIES), ZENTRALINSTITUT FUR KERNFORSCHUNG, ROSSENDORF (D.D.R.).

688 ALBERT, P.
SYSTEMATIC ANALYSIS OF IMPURITIES IN ZONE REFINED ALUMINUM AND IRON BY IRRADIATION IN THE ATOMIC PILE.
PURE AND APPL. CHEM., 1, 111-119 (1960(, (FRENCH) (ENGLISH SUMMARY), C.N.R.S., 15 RUE G. URBAIN, VITRY, SEINE, FRANCE.

703 ALBERT, P.
THE USE OF REACTIONS INDUCED BY ACCELERATED PROTONS, DEUTERONS, HELIONS AND GAMMA PHOTONS IN RADIOACTIVATION ANALYSIS FOR THE DETERMINATION OF OXYGEN, CARBON, AND NITROGEN IN METALS.
PROCEEDINGS INTERNATIONAL CONFERENCE ON MODERN TRENDS IN ACTIVATION ANALYSIS, COLLEGE STATION, TEXAS, 78-85, DECEMBER 1961, (ENGLISH), CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, CENTRE D ETUDES DE CHIMIE METALLURGIQUE, VITRY SUR SEINE, FRANCE.

704 ALBERT, P.
A COMBINATION OF CHEMICAL AND PHYSICOCHEMICAL METHODS FOR A SYSTEMATIC SEPARATION OF LARGE NUMBERS OF RADIOISOTOPES ON ONE EXPERIMENTAL ANALYSIS OF ALUMINUM, IRON, AND ZIRCONIUM BY RADIOACTIVATION.
PROCEEDINGS INTERNATIONAL CONFERENCE ON MODERN TRENDS IN ACTIVATION ANALYSIS, COLLEGE STATION, TEXAS, 86-94, DECEMBER 1961, (ENGLISH), CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, CENTRE D ETUDES DE CHIMIE METALLURGIQUE, VITRY SUR SEINE, FRANCE.

744 VON ARDENNE, M. * BERNHARD, F.
A NUCLEAR PHYSICAL METHOD FOR DETERMINING SMALL QUANTITIES OF CARBON IN IRON.
Z. PHYSIK., 122, 740-748 (1944), (GERMAN), KERNPHYSIKALISCHEN INSTITUT DES REICHSPOSTMINISTERIUMS, BERLIN- LICHTERFELDE-OST UND DER FORSCHUNGSANSTALT DER FRIEDRICH KRUPP, ESSEN, GERMANY.

760 FOURNET, L.
SYSTEMATIC ANALYSIS OF ZIRCONIUM AFTER NEUTRON IRRADIATION.
THESES. A LA FACULTE DES SCIENCES DE L UNIVERSITE DE PARIS, 43P., 28 MAY 1962, (FRENCH), FRANCE.

762 CERRAI, E. * GADDA, F.
THE DETERMINATION OF OXYGEN IN ZIRCONIUM BY RADIOACTIVATION WITH 14 MEV NEUTRONS.
ENERGIA NUCLEARE, 9, NO. 6, 317-325 (1962), (ENGLISH) (ITALIAN SUMMARY), LABORATORI CISE - SEGRATE, MILANO, ITALY.

767 ALBERT, P. * GAITTET, J.
USE OF RADIOISOTOPES IN THE SYSTEMATIC ANALYSIS OF IMPURITIES IN METALS OF VERY HIGH PURITY.
RADIOISOTOPES IN THE PHYSICAL SCIENCES AND INDUSTRY, IAEA, VIENNA, 243-259 (1962), (FRENCH) (ENGLISH, RUSSIAN AND SPANISH SUMMARIES), CENTRE D ETUDES DE CHIME METALLURGIQUE, CNRS, VITRY, FRANCE.

DETERMINATION OF LIGHT ELEMENTS IN METALS - ACCESSION NUMBERS

814 ALBERT, P. * ENGELMANN, C. * MAY, S. * PETIT, J.
ANALYSIS OF OXYGEN, CARBON, AND NITROGEN BY
ACTIVATION BY MEANS OF GAMMA, N REACTION.
COMPT. REND., 254, 119-121 (1962), (FRENCH),
LABORATOIRE DE VITRY DU C.N.R.S. ET CENTRE D
ETUDES NUCLEAIRES DE SACLAY, FRANCE.

850 BAKER, C.A.
SOME TECHNIQUES FOR THE DETERMINATION OF ISOTOPES
OF SHORT HALF-LIFE AS APPLIED TO THE ACTIVATION
ANALYSIS OF BERYLLIUM.
PRODUCTION AND USE OF SHORT-LIVED RADIOISOTPES
FROM REACTORS (PROCEEDINGS OF A SEMINAR, VIENNA,
5-9 NOVEMBER 1962), VOL. II, 39-44 (1963),
(ENGLISH) FRENCH, RUSSIAN AND SPANISH SUMMARIES).
UKAEA (RESEARCH GROUP), LONDON, ENGLAND.

864 BLACKBURN, R. * PETERS, B.F.G.
DETERMINATION OF PHOSPHORUS IN HYPEREUTECTIC
ALUMINUM-SILICON ALLOYS BY A NEUTRON ACTIVATION
METHOD.
ANAL. CHEM., 35, 10-13 (1963), (ENGLISH), TUBE
INVESTMENTS RESEARCH LABORATORIES, HINXTON HALL,
CAMBRIDGE, ENGLAND.

892 MELLET, M.
APPLICATION OF RADIOACTIVATION FOR THE
DETERMINATION OF TRACES IN HIGH PURITY MATERIALS
FOR THE ELABORATION OF SEMI-CONDUCTORS AND
ELECTRONIC TUBES.
COMPTES RENDUS DES JOURNEES D ETUDES SUR L ANALYSE
PAR ACTIVATION, GRENOBLE, FRANCE, PRESSES
UNIVERSITAIRES DE FRANCE, 121-124, MAY 1961,
(FRENCH). C.N.E.T. ISSY LES MOULINEAUX, FRANCE.

893 HOSTE, J. * LELIAERT, G. * BOUTEU, P.
ACTIVATION ANALYSIS OF MINERAL CONSTITUENTS IN
STEEL AND PIG IRON WITH THE AID OF AN INTERNAL
STANDARD.
COMPTES RENDUS DES JOURNEES D ETUDES SUR L ANALYSE
PAR ACTIVATION, GRENOBLE, FRANCE, PRESSES
UNIVERSITAIRES DE FRANCE, 125, MAY 1961, (FRENCH),
UNIVERSITE DE GAND, LABORATOIRE DE CHIMIE
ANALYTIQUE, BELGIQUE.

912 THOMPSON, B.A.
DETERMINATION OF OXIDE FILM THICKNESS BY PROTON ACTIVATION.
ANAL. CHEM., 33, 583-586 (1961), (ENGLISH).
GENERAL ENGINEERING LABORATORY, GENERAL ELECTRIC CO., SCHENECTADY, N.Y.

979 LEWIS, J.E.
EXPERIENCE WITH NEUTRON ACTIVATION IN THE ANALYSIS OF ALUMINUM.
SYMPOSIUM ON RADIOISOTOPE IN METALS ANALYSIS AND TESTING, ASTM NO. 261, 46-51 (1959), (ENGLISH).
ALCOA RESEARCH LABORATORIES, NEW KENSINGTON, PA.

985 RAKOVSKII, E.E. * SMAKHTIN, L.A. * YAKOVLEV, Y.V.
THE DETERMINATION OF MICROIMPURITIES IN HIGH PURITY ANTIMONY BY THE RADIOACTIVATION METHOD OF ANALYSIS.
INDUSTRIAL LABORATORY, 26, 1383-1385 (1961), (ENGLISH TRANSLATION), V.I. VERNADSKII INSTITUTE OF GEOCHEMISTRY AND ANALYTICAL CHEMISTRY OF THE ACADEMY OF SCIENCES OF THE USSR, RUSSIA.

1013 ROMMEL, H.
BORON DETERMINATION BY ACTIVATION ANALYSIS USING THE NUCLEAR REACTION B-11 (P,N) C-11.
KERNENERGIE, 5, 859-860 (1962), (GERMAN),
MITTEILUNG AUS DEM ZENTRALINSTITUT FUR KERNPHYSIK, BEREICH RADIOCHEMIE, ROSSENDORF BEI DRESDEN, GERMANY.

1026 PIERCE, T.B. * PECK, P.F. * HENRY, W.M.
DETERMINATION OF CARBON IN STEELS BY MEASUREMENT OF THE PROMPT GAMMA-RADIATION EMITTED DURING PROTON BOMBARDMENT.
NATURE, 204, 571-572 (1964), (ENGLISH), ANALYTICAL CHEMISTRY BRANCH, AERE, HARWELL, BERKS, ENGLAND.

1067 MIYOSHI, K.
A 14-MEV NEUTRON-ACTIVATION ANALYSIS UNIT FOR OXYGEN DETERMINATION.
TOSHIBA REBYU, 20, 671-676 (JULY 1965).
(JAPANESE) (ENGLISH SUMMARY), TAMAGAWA WORKS, TOKYO SHIBAURA ELECTRIC CO., LTD., JAPAN.

1085 BOUTEN, P. * HOSTE, J.
THE DETERMINATION OF SULPHUR AND PHOSPHORUS IN
STEEL BY NEUTRON ACTIVATION ANALYSIS,
ANAL. CHIM. ACTA, 27, 315-319 (1962), (ENGLISH)
(FRENCH AND GERMAN SUMMARIES), LABORATORY FOR
ANALYTICAL CHEMISTRY, GHENT UNIVERSITY, BELGIUM.

1091 BUSCH, G. * SCHADE, H. * GOBBI, A. * MARMIER, P.
DETECTION OF BORON ON SILICON SURFACES WITH
ACTIVATION ANALYSIS,
J. PHYS. CHEM. SOLIDS, 23, 513-514 (1962),
(GERMAN) (ENGLISH SUMMARY), LABORATORIUM FUR
FESKORPERPHYSIK, ETH, ZURICH.

1103 COLEMAN, R.F.
THE DETERMINATION OF OXYGEN BY FAST-NEUTRON
ACTIVATION,
ANALYST, 87, 590-593 (1962), (ENGLISH), UKAEA,
AWRE, ALDERMASTON, BERKS, ENGLAND,

1104 COLEMAN, R.F.
THE DETERMINATION OF OXYGEN IN BERYLLIUM BY
ACTIVATION ANALYSIS,
UKAEA PG REPORT 171, 73-80 (1960), (ENGLISH),
AWRE, ALDERMASTON, ENGLAND,

1118 GEBAUHR, W. * MARTIN, J.
ACTIVATION ANALYTICAL INVESTIGATION OF HIGH-PURITY
SILICON,
Z. ANAL. CHEM., 200, 266-278 (1964), (GERMAN)
(ENGLISH SUMMARY), AUS DEM FORSCHUNGSLABORATORIUM
DER SIEMENS-SCHUCKERTWERKE AG, ERLANGEN, GERMANY,

1124 GRUVERMAN, I.J. * HENNINGER, W.A.
NEUTRON ACTIVATION ANALYSIS OF ALLOY STEEL AND
ELECTRO-ETCH RESIDUES FOR SIXTEEN ELEMENTS,
ANAL. CHEM., 34, 1680-1683 (1962), (ENGLISH),
NUCLEAR SCIENCE AND ENGINEERING CORP., PITTSBURGH,
PENNSYLVANIA.

1151 SAITO, K. * NOZAKI, T. * TANAKA, S. * FURUKAWA, M.
* CHENG, H.
RADIOACTIVATION ANALYSIS OF OXYGEN IN HIGH-PURITY
SILICON BY IRRADIATION WITH ALPHA-PARTICLES,
INTERN. J. APPL. RAD. AND ISOTOPES, 14, 357-363
(1963), (ENGLISH) (FRENCH, RUSSIAN AND GERMAN
SUMMARIES). INSTITUTE FOR NUCLEAR STUDY, THE
UNIVERSITY OF TOKYO, TANASHI, TOKYO, JAPAN.

1158 LEONHARDT, W.
THE SENSITIVITY OF OXYGEN DETERMINATION BY
ACTIVATION ANALYSIS IN REACTORS,
KERNENERGIE, 5, 166-170 (1962), (GERMAN),
ZENTRALINSTITUT FUR KERNPHYSIK, BEREICH
RADIOCHEMIE, ROSSENDORF BEI DRESDEN, GERMANY,

1165 AUBOUIN, G. * DUGAIN, F. * LAVERLOCHERE, J.
DETERMINATION OF IMPURITIES IN TANTALUM AND
NIOBIUM BY NEUTRON RADIO ACTIVATION,
BULL. SOC. CHIM. FRANCE, 2, 547-551 (1965),
(FRENCH). DR/SAR, CEN GRENOBLE, FRANCE,

1166 MAKASHEVA, I.E. * MASLOV, I.A. * OBUKHOV, A.P.
RADIOACTIVATION ANALYSIS OF SEMICONDUCTING SILICON
BY MEANS OF A MULTI-CHANNEL GAMMA-SPECTROMETER,
J. ANAL. CHEM. USSR, 15, 375-379 (1960), (ENGLISH
TRANSLATION). PHYSICO-TECHNICAL INSTITUTE, ACADEMY
OF SCIENCES, USSR, LENINGRAD, RUSSIA,

1193 NIESE, S. * ROMMEL, H. * MORZEK, P. * HEROLD, C.
ACTIVATION ANALYSIS PURITY TESTING OF TARGETS FOR
ISOTOPE PRODUCTION,
ACTA CHIM. ACAD. SCI. HUNG., 26, 235-241 (1961),
(GERMAN). ZENTRALINSTITUT FUR KERNPHYSIK,
ROSSENDORF, BEREICH RADIOCHEMIE, GERMANY,

1194 NOZAKI, T. * TANAKA, S. * FURUKAWA, M. * SAITO, K.
RADIOACTIVATION ANALYSIS OF OXYGEN IN SILICON BY
IRRADIATION WITH ALPHA-PARTICLES IN A CYCLOTRON,
NATURE, 190, 39-40 (1961), (ENGLISH), INSTITUTE
FOR NUCLEAR STUDY, UNIVERSITY OF TOKYO, TANASHI,
JAPAN.

1215 SHAMAEV, V.I.
ANALYSIS OF MICROIMPURITIES IN SELENIUM AND IN
TELLURIUM BY NEUTRON ACTIVATION,
RADIOCHEMISTRY, USSR, 113-118 (1960), (ENGLISH
TRANSLATION), RUSSIA,

1219 SIMON, L.
THE DETERMINATION OF C IN IRON BY THE
RADIOACTIVATION METHOD,
HUTNICKE LISTY, 13, 708-711 (1958), (CZECH),
CZECHOSLOVAKIA,

1263 ENGELMANN, C. * GOSSET, J. * LOEUILLET, M.
ROUTINE ACTIVATION ANALYSIS OF CERTAIN IMPURITIES OF BERYLLIUM.
BULL. SOC. CHIM. FRANCE, 2, 544-547 (1965), (FRENCH). COMMISSARIAT A L ENERGIE ATOMIQUE, DEPARTMENT DE METALLURGIE, FRANCE.

1309 DUTINA, D.
DETERMINATION OF OXYGEN IN ZIRCALOY BY FAST NEUTRON ACTIVATION.
KAPL-2000-19, I,14-I,23 (1962), (ENGLISH), KNOLLS ATOMIC POWER LABORATORY, SCHNECTADY, N.Y.

1318 MARKOWITZ, S.S. * MAHONY, J.D.
ACTIVATION ANALYSIS FOR OXYGEN AND OTHER ELEMENTS BY HELIUM-3-INDUCED NUCLEAR REACTIONS.
ANAL. CHEM., 34, 329-335 (1962), (ENGLISH). LAWRENCE RADIATION LABORATORY AND DEPARTMENT OF CHEMISTRY, UNIVERSITY OF CALIFORNIA, BERKELEY, CALIF.

1378 CUYPERS, M. * LE HERICY, J. * CUYPERS, J. * ALBERT, P.
DETERMINATION OF SULFUR IN COPPER BY NEUTRON ACTIVATION.
COMPT. REND., 261, 5494-5496 (DECEMBER 20, 1965), (FRENCH). CENTRE D ETUDE DE CHIMIE METALLURGIQUE DU CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE, VITRY, VAL-DE-MARNE, FRANCE.

1394 METCALF, A.
A NEUTRON ACTIVATION TECHNIQUE FOR OXYGEN DETERMINATION.
STEEL TIMES, 188, 90-92 (1964), (ENGLISH), BISRA STEELMAKING DIVISION, ENGLAND.

1453 BURNS, F.C.
DETERMINING THE OXYGEN CONTENT OF STEEL BY NEUTRON ACTIVATION TECHNIQUES.
J. METALS, 16, 948 (1964), (ENGLISH), U.S. ARMY MATERIALS RESEARCH AGENCY, WATERTOWN, MASS.

1471 MIGNONSIN, E.P. * ALBERT, P.
ANALYSIS OF PURE ZIRCONIUM BY NEUTRON RADIO ACTIVATION.
BULL. SOC. CHIM. FRANCE, 2, 553-561 (1965), (FRENCH). CENTRE DE ETUDES DE CHIMIE METALLURGIQUE, VITRY, FRANCE.

1477 CUYPERS, M.
SYSTEMATIC ANALYSIS OF HIGH PURITY COPPER, FOLLOWING ITS IRRADIATION BY THERMAL NEUTRONS.
ANN. CHIM. (PARIS), 9, 509-540 (1964). (FRENCH). LABORATOIRE DE RADIOCHIMIE ANALYTIQUE DU CENTRE D ETUDES DE CHIMIE METALLURGIQUE, VITRY (SEINE), FRANCE.

1483 CONDIT, R.H. * HOLT, J.B.
A TECHNIQUE FOR STUDYING OXYGEN DIFFUSION AND LOCATING OXIDE INCLUSION IN METALS BY USING THE PROTON RADIOACTIVATION OF OXYGEN-18.
J. ELECTROCHEM. SOC., 111, 1192-1194 (1964). (ENGLISH). LAWRENCE RADIATION LABORATORY, UNIVERSITY OF CALIFORNIA, LIVERMORE, CALIFORNIA.

1520 ROHNSCH, W.
DETERMINATION OF PHOSPHORUS, SULFUR, AND CHLORINE IN SELENIUM BY ACTIVATION ANALYSIS.
MIKROCHIM. ICHNOANAL. ACTA. 1, 10-16 (1965). (GERMAN) (ENGLISH AND FRENCH SUMMARIES). INSTITUT FUR ANGEWANDTE RADIOAKTIVITAT, LEIPZIG, DER DEUTSCHEN AKADEMIE DER WISSENSCHAFTEN ZU BERLIN, GERMANY.

1546 LOBANOV, E.M. * ZVYAGIN, V.I. * ZVEREV, B.P. * BLINKOV, D.I.
ON THE SENSITIVITY OF A METHOD FOR DETERMINING BORON IN A SILICON BY NEUTRON CAPTURE REACTORS.
RADIATSIONNYE EFFEKTY V KONDENSIROVANNYKH SREDAKH. TASHKENT, PUBLISHING HOUSE OF THE SCIENCES, 64-73 (1964). (RUSSIAN). RUSSIA.

1547 LOBANOV, E.M. * ZVYAGIN, V.I. * ZVEREV, B.P.
THE PROBLEM OF DETERMINING A LOW CONCENTRATION OF BORON IMPURITY IN SILICON.
RADIATSIONNYE EFFEKTY V KONDENSIROVANNYKH SREDAKH. TASHKENT, PUBLISHING HOUSE OF THE SCIENCES, 74-76 (1964). (RUSSIAN). RUSSIA.

1560 LUTZ, G.J. * DE SOETE, D.
DETERMINATION OF CARBON IN SODIUM BY PHOTON ACTIVATION ANALYSIS.
ANAL. CHEM., 40, NO. 4, 820-822 (1968). (ENGLISH). NATIONAL BUREAU OF STANDARDS, WASHINGTON, D.C.

1561 ZVYAGIN, V.I. * LOBANOV, E.M. * ZVEREV, B.P. *
LENCHENKO, V.M.
APPLICATION OF B-10(N,ALPHA)LI-7 REACTION TO THE
DETERMINATION OF BORON IN SILICON.
RADIATSIONNYE EFFEKTY V TVERDYKH TELAKH,
TASHKENT, PUBLISHING HOUSE OF ACADEMY OF SCIENCES,
56-67 (1963). (RUSSIAN). RUSSIA.

1570 GIBBONS, D. * SIMPSON, H.
THE DETERMINATION OF SULPHUR IN MATERIALS OF HIGH
NEUTRON ABSORPTION CROSS-SECTION BY FAST NEUTRON
ACTIVATION ANALYSIS.
INTERN. J. APPL. RAD. AND ISOTOPES, 9, 143 (1960).
(ENGLISH). UKAEA, AERE, HARWELL, DIDCOT, ENGLAND.

1589 HARRIS, W.F.
AN INVESTIGATION OF FAST NEUTRON ACTIVATION
ANALYSIS FOR DETERMINATION OF OXYGEN IN METALS.
TALANTA, 11, 1376-1380 (1964). (ENGLISH) (GERMAN
AND FRENCH SUMMARIES). GENERAL ATOMIC DIVISION,
GENERAL DYNAMICS CORP., SAN DIEGO, CALIF.

1590 KINSEY, R.J. * DANFORTH, J.P. * GREEN, F.L. *
KERWICK, W. * KOHN, R.E.
THE ANALYSIS OF SILICON IN CAST IRON BY FAST
NEUTRON ACTIVATION.
TRANS. AM. NUCL. SOC., 5, 200-201 (1962).
(ENGLISH). GMC, DANVILLE.

1591 KOHN, R.E. * GREEN, F.L.
THE DETERMINATION OF SILICON IN ALUMINUM ALLOY BY
FAST NEUTRON ACTIVATION ANALYSIS.
TRANS. AM. NUCL. SOC., 5, 201 (1962). (ENGLISH).
GENERAL MOTORS RESEARCH LABORATORIES, WARREN,
MICHIGAN.

1599 MAHONY, J.D. * PARSA, B. * MARKOWITZ, S.S.
ACTIVATION ANALYSIS FOR CARBON AND NITROGEN BY
HE-3 INDUCED NUCLEAR REACTIONS.
UCRL-11213, 87-90, FEBRUARY 1964. (ENGLISH).
LAWRENCE RADIATION LABORATORY, UNIVERSITY OF
CALIFORNIA, BERKELEY, CALIF.

1604 HOLM, D.M. * SANDERS, W.M. * BRISCOE, W.L. *
PARKER, J.L.
MEASUREMENT OF THE SURFACE DISTRIBUTION OF CARBON
AND OXYGEN BY HE-3 ACTIVATION AND AUTORADIOGRAPHY.
LA-DC-8784, 15P., 1966. (ENGLISH). UNIVERSITY OF
CALIFORNIA, LOS ALAMOS SCIENTIFIC LABORATORY, LOS
ALAMOS, NEW MEXICO.

1618 CLARK, L., JR. * RASMUSSEN, N.C.
PROMPT ACTIVATION ANALYSIS FOR BORON AND LITHIUM.
AFCRL-63-575, 92P., OCTOBER 1963. (ENGLISH).
MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE,
MASS.

1621 JAMIN-CHANGEART, F. * TALBOT-BESNARD, S.
SOLUBILITY OF SULFUR IN HIGHLY PURIFIED IRON.
COMPT. REND., 258, 907-909 (1964). (FRENCH).
CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE,
PARIS, FRANCE.

1709 EMERY, J.F. * MULLINS, W.T. * BATE, L.C. *
LEDDICOTTE, G.W.
TRACE ELEMENT DETERMINATION IN NIOBIUM AND
ZIRCONIUM METAL BY RADIOACTIVATION ANALYSIS.
ZIRCONIUM.
TID-7629, 239-243, OCTOBER 1961. (ENGLISH). OAK
RIDGE NATIONAL LABORATORY, OAK RIDGE, TENNESSEE.

1711 ROSS, W.J.
DETERMINATION OF SULFUR BY NEUTRON-ACTIVATION
ANALYSIS.
ORNL-3397, 100 (1963). (ENGLISH) OAK RIDGE
NATIONAL LABORATORY, OAK RIDGE, TENN.

1730 BORN, H.J. * WILKNISS, P.E.
ON THE ACTIVATION ANALYSIS OF OXYGEN WITH THE HELP
OF THE REACTION O-16 (T,N) F-18.
INTERN. J. APPL. RAD. AND ISOTOPES, 10, 133-136
(1961). (GERMAN). INSTITUT FUR RADIOCHEMIE,
MUNCHEN, GERMANY.

1739 BURNS, F.C.
FAST NEUTRON ACTIVATION VS. VACUUM FUSION ANALYSIS
FOR OXYGEN IN METALS.
CONF-313-11, SOCIETY FOR APPLIED SPECTROSCOPY, 2ND
NATIONAL MEETING, SAN DIEGO, CALIFORNIA, 9P.,
OCTOBER 14-18, 1963. (ENGLISH). USA.

1742 SAITO, K. * NOZAKI, T. * TANAKA, S. * FURUKAWA, M. * CHENG, H.
RADIOACTIVATION ANALYSIS OF OXYGEN IN HIGH-PURITY SILICON BY IRRADIATION WITH ALPHA-PARTICLES.
INTERN. J. APPL. RAD. AND ISOTOPES, 14, 357-363 (1963). (ENGLISH) (FRENCH, RUSSIAN AND GERMAN SUMMARIES). INSTITUTE FOR NUCLEAR STUDY, THE UNIVERSITY OF TOKYO, TANASHI, TOKYO, JAPAN.

1787 CLARK, L., JR. * RASMUSSEN, N.C.
PROMPT ACTIVATION ANALYSIS FOR BORON AND LITHIUM.
TRANS. AM. NUCL. SOC., 6, 182 (1963). (ENGLISH). MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MASS.

1804 BRAMLITT, E.T.
HEAVY WATER ORGANIC COOLED REACTOR. DETERMINATION OF TOTAL OXYGEN IN AL-AL SUB 2 O SUB 3 ALLOYS BY FAST NEUTRON ACTIVATION ANALYSIS.
AI-CE-74, 27P., AUGUST 15, 1967. (ENGLISH). ATOMICS INTERNATIONAL, CANOGA PARK, CALIF.

1816 ENGELMANN, C.
DETERMINATION OF OXYGEN, CARBON, NITROGEN AND CERTAIN OTHER IMPURITIES IN BERYLLIUM, CALCIUM, SODIUM, AND BORON BY GAMMA-RAY ACTIVATION.
RADIOCHEMICAL METHODS OF ANALYSIS, IAEA VIENNA, VOL. I, 341-359 (1965). (FRENCH) (ENGLISH, RUSSIAN AND SPANISH SUMMARIES). CENTRE D ETUDES NUCLEAIRES, SACLAY, FRANCE.

1821 SPENKE, H. * CLESS-BERNERT, T. * KARLIK, B.
DETERMINATION OF BORON IN STEEL BY NEUTRON ACTIVATION DEPRESSION.
RADIOCHEMICAL METHODS OF ANALYSIS, IAEA VIENNA, VOL. I, 197-203 (1965). (ENGLISH) (FRENCH, RUSSIAN AND SPANISH SUMMARIES). OSTERREICHISCHE STUDIENGESSELLSCHAFT FUR ATOMENERGIE, INSTITUT FUR RADIUMFORSCHUNG UND KERNPHYSIK, VIENNA, AUSTRIA.

1823 ENGELMANN, C.
ACTIVATION ANALYSIS OF SOME LIGHT ELEMENTS IN VARIOUS MATERIALS USING CHARGED PARTICLES (ALPHA AND P).
RADIOCHEMICAL METHODS OF ANALYSIS, IAEA VIENNA, VOL. I, 405-418 (1965). (FRENCH) (ENGLISH, RUSSIAN AND SPANISH SUMMARIES). CENTRE D ETUDES NUCLEAIRES, SACLAY, FRANCE.

1831 MARKOWITZ, S.S. * MAHONY, J.D.
HE-3 ACTIVATION ANALYSIS FOR CARBON BY C-12 (HE-3, ALPHA) C-11 REACTION.
RADIOCHEMICAL METHODS OF ANALYSIS, IAEA VIENNA, VOL. I, 419-432 (1965), DEPARTMENT OF CHEMISTRY AND LAWRENCE RADIATION LABORATORY, UNIVERSITY OF CALIFORNIA, BERKELEY, CALIF.

1875 WOOD, D.E. * ROPER, N.J.
FAST NEUTRON ACTIVATION ANALYSIS FOR SILICON IN IRON.
KN-65-140(R), 21P., 15 APRIL 1965, (ENGLISH), KAMAN NUCLEAR, COLORADO SPRINGS, COLORADO.

1900 STEELE, E.L. * LUKENS, H.R.
DEVELOPMENT OF NEUTRON ACTIVATION ANALYSIS PROCEDURES FOR THE DETERMINATION OF OXYGEN IN POTASSIUM. FIRST AND SECOND QUARTERLY REPORT (PERIOD ENDING DECEMBER 26, 1963),
GA-4855, 30P., JANUARY 10, 1964, (ENGLISH), GENERAL ATOMIC DIVISION, GENERAL DYNAMICS CORP., SAN DIEGO, CALIF.

1915 AMSEL, G.
MICROANALYSIS BY THE OBSERVATIONS OF NUCLEAR REACTIONS APPLICATION TO SOLID-STATE PHYSICS (THESIS).
LAL-1053, 39P., MAY 1963, (FRENCH), PARIS, UNIVERSITE, ORSAY, ECOLE NORMALE SUPERIEURE, LABORATOIRE DE L ACCELERATEUR LINEAIRE, FRANCE.

1950 PASZTOR, L.C. * WOOD, D.E.
A COMPARISON OF NEUTRON-ACTIVATION ANALYSIS AND HOT EXTRACTION ANALYSIS OF THE OXYGEN CONTENT OF STEEL.
TALANTA, 13, 389-401 (1966), (ENGLISH) (GERMAN AND FRENCH SUMMARIES), GRAHAM RESEARCH LABORATORY, JONES AND LAUGHLIN STEEL CORPORATION, PITTSBURGH, PA.

1951 PIERCE, T.B. * PECK, P.F. * HENRY, W.M. * HOOTON, B.W.
THE USE OF A LITHIUM-DRIFTED GERMANIUM DIODE TO DETERMINE CARBON IN STEELS BY MEASUREMENT OF PROMPT GAMMA-RADIATION.
ANAL. CHIM. ACTA, 33, 586-592 (1965), (ENGLISH) (FRENCH AND GERMAN SUMMARIES), ANALYTICAL CHEMISTRY BRANCH AND NUCLEAR PHYSICS DIVISION, ATOMIC ENERGY RESEARCH ESTABLISHMENT, HARWELL, BERKS, ENGLAND.

1956 WOOD, D.E. * JESSEN, P.L. * JONES, R.E.
NEW DEVELOPMENTS IN NEUTRON ACTIVATION SYSTEMS FOR ANALYSIS OF OXYGEN IN STEEL.
PAPER PRESENTED TO THE 1966 PITTSBURGH CONFERENCE ON ANALYTICAL CHEMISTRY AND APPLIED SPECTROSCOPY, FEBRUARY 21-25, 1966, 16P., 20 FIGURES, (ENGLISH), KAMAN NUCLEAR, COLORADO SPRINGS, COLORADO.

1965 MALVANO, R. * GROSSO, P.
DETERMINATION OF TRACE ELEMENTS IN IRON BY NEUTRON-ACTIVATION TECHNIQUES.
ANAL. CHIM. ACTA, 34, 253-268 (1966), (ENGLISH) (FRENCH AND GERMAN SUMMARIES), SORIN, CENTRO RICERCHE NUCLEARI, SALUGGIA, ITALY.

2381 REVEL, G. * ALBERT, P.
STUDY OF THE POSSIBILITIES OF DETERMINING OXYGEN IN ZIRCONIUM, MOLYBDENUM, HAFNIUM, AND TUNGSTEN BY IRRADIATION WITH HE-3 AND HE-4 PARTICLES.
J. NUCL. MATER., 25, 87-92 (1968), (FRENCH) (ENGLISH AND GERMAN SUMMARIES). CNRS, VITRY-SUR-SEINE, FRANCE.

2386 SIMKOVA, M. * PINKAS, V.
DETERMINATION OF IMPURITIES IN SILICON BY ACTIVATION ANALYSIS.
ISOTOPENPRAXIS, 3, 88-91 (MARCH 1967), (GERMAN), INSTITUT FUR KERNFORSCHUNG, REZ, PRAG, CZECHOSLOVAKIA.

2418 ISHII, D. * MORI, H. * HIROSE, Y.
DETERMINATION OF OXYGEN IN FERROSILICON BY 14 MEV NEUTRON ACTIVATION ANALYSIS. APPLICATION OF THE GOLD AS INTERNAL STANDARD METHOD.
BUNSEKI KAGAKU, 16, NO. 12, 1370-1373 (1967), (JAPANESE) (ENGLISH SUMMARY), FACULTY OF ENGINEERING, NAGOYA UNIVERSITY, CHIKUSA-KU, NAGOYA-SHI, JAPAN.

2429 PIERCE, T.B. * PECK, P.F. * CUFF, D.R.A.
APPLICATION OF INELASTIC PROTON SCATTERING TO THE
RAPID DETERMINATION OF SILICON IN STEELS,
ANAL. CHIM. ACTA, 39, 433-436 (DECEMBER 1967),
(ENGLISH) (FRENCH AND GERMAN SUMMARIES),
ANALYTICAL SCIENCES DIVISION, AERE, HARWELL,
DIDCOT, BERKS., ENGLAND,

2505 BLAKE, K.R. * MARTIN, T.C. * MORGAN, I.L. *
HOUSTON, C.D.
THE MEASUREMENT OF SURFACE CONTAMINATION OF
HIGH-PURITY BERYLLIUM SAMPLES,
PROCEEDINGS 1965 INTERNATIONAL CONFERENCE, MODERN
TRENDS IN ACTIVATION ANALYSIS, COLLEGE STATION,
TEXAS, 76-81, APRIL 19-22, 1965, (ENGLISH),
TEXAS NUCLEAR CORPORATION, AUSTIN, TEXAS,

2507 GRAY, A.L. * METCALF, A.
INDUSTRIAL APPLICATIONS OF NEUTRON ACTIVATION,
PROCEEDINGS 1965 INTERNATIONAL CONFERENCE, MODERN
TRENDS IN ACTIVATION ANALYSIS, COLLEGE STATION,
TEXAS, 86-90, APRIL 19-22, 1965, (ENGLISH),
PLESSEY-UK LIMITED, HANTS., ENGLAND,

2523 MOISEEV, V.V. * KUZNETSOV, R.A. * KALININ, A.I.
THE RADIOACTIVATION ANALYSIS OF SILICON AND
SILICON COMPOUNDS WITH THE SUCCESSIVE USE OF
ION-EXCHANGE CHROMATOGRAPHY,
PROCEEDINGS 1965 INTERNATIONAL CONFERENCE, MODERN
TRENDS IN ACTIVATION ANALYSIS, COLLEGE STATION,
TEXAS, 164-168, APRIL 19-22, 1965, (ENGLISH),
INSTITUTE OF SILICATE CHEMISTRY OF THE ACADEMY OF
SCIENCES, LENINGRAD, U.S.S.R.

2526 WOOD, J.D.L.H. * DOWNTON, D.W. * BAKES, J.M.
A FAST-NEUTRON ACTIVATION ANALYSIS SYSTEM WITH
INDUSTRIAL APPLICATIONS,
PROCEEDINGS 1965 INTERNATIONAL CONFERENCE, MODERN
TRENDS IN ACTIVATION ANALYSIS, COLLEGE STATION,
TEXAS, 175-181, APRIL 19-22, 1965, (ENGLISH),
SERVICES ELECTRONICS RESEARCH LABORATORY, BALDOCK,
HERTFORDSHIRE, ENGLAND.

2542 WOOD, D.E. * PASZTOR, L.C.
A COMPARISON OF NEUTRON-ACTIVATION ANALYSIS AND VACUUM-FUSION ANALYSIS OF THE OXYGEN CONTENT OF STEEL.
PROCEEDINGS 1965 INTERNATIONAL CONFERENCE. MODERN TRENDS IN ACTIVATION ANALYSIS, COLLEGE STATION, TEXAS, 259-264, APRIL 19-22, 1965, (ENGLISH).
KAMAN NUCLEAR, COLORADO SPRINGS, COLORADO.

2549 BYRNE, J.T. * ILLSLEY, C.T. * PRICE, H.J.
AN AUTOMATIC SYSTEM FOR THE DETERMINATION OF OXYGEN IN BERYLLIUM METAL COMPONENTS.
PROCEEDINGS 1965 INTERNATIONAL CONFERENCE. MODERN TRENDS IN ACTIVATION ANALYSIS, COLLEGE STATION, TEXAS, 304-310, APRIL 19-22, 1965, (ENGLISH).
ROCKY FLATS DIVISION, DOW CHEMICAL COMPANY, GOLDEN, COLORADO.

2550 ALBERT, P. * CUYPERS, M. * LESBATS, A. * MIGNONSIN, E.P.
NEW DEVELOPMENTS IN THE SYSTEMATIC ANALYSIS OF HIGH PURITY METALS AND ESPECIALLY OF ALUMINUM, COPPER AND ZIRCONIUM.
PROCEEDINGS 1965 INTERNATIONAL CONFERENCE. MODERN TRENDS IN ACTIVATION ANALYSIS, COLLEGE STATION, TEXAS, 310-315, APRIL 19-22, 1965, (ENGLISH).
LABORATORY OF ANALYTICAL RADIOCHEMISTRY OF THE CENTRE D ETUDES DE CHIMIE METALLURGIQUE, CNRS, VITRY, FRANCE.

2562 DE GOEIJ, J.J.M. * HOUTMAN, J.P.W.
OXYGEN DETERMINATION USING TRITON ACTIVATION.
PROCEEDINGS 1965 INTERNATIONAL CONFERENCE. MODERN TRENDS IN ACTIVATION ANALYSIS, COLLEGE STATION, TEXAS, 372-379, APRIL 19-22, 1965, (ENGLISH).
REACTOR INSTITUTE AT DELFT, DELFT, THE NETHERLANDS.

2586 VAN WYK, J.M. * CUYPERS, M.Y. * FITE, L.E. * WAINERDI, R.E.
A STUDY OF THE MACROSCOPIC DISTRIBUTION OF OXYGEN IN A STEEL ROD BY NEUTRON-ACTIVATION AND VACUUM FUSION TECHNIQUES.
ANALYST, 91, 316-323 (MAY 1966). (ENGLISH).
SOUTH AFRICAN IRON AND STEEL INDUSTRIAL CORPORATION, PRETORIA, SOUTH AFRICA.

2596 EICHELBERGER, J.F. * GROVE, G.R. * JONES, L.V.
MOUND LABORATORY PROGRESS REPORT FOR NOVEMBER 1964.
MLM-1227, 37P., NOVEMBER 30, 1964, (ENGLISH).
MOUND LABORATORY, MIAMISBURG, OHIO.

2598 STEELE, E.L. * LUKENS, H.R. * GUINN, V.P.
NEUTRON ACTIVATION ANALYSIS PROCEDURES FOR THE DETERMINATION OF OXYGEN IN POTASSIUM.
GA-5982, 51P., DECEMBER 1964, (ENGLISH). GENERAL ATOMIC DIVISION, GENERAL DYNAMICS CORPORATION, SAN DIEGO, CALIF.

2615 KOPINECK, H.J. * SOMMERKORN, G. * BASS, R. *
PRESSER, G.
DETERMINATION OF THE OXYGEN CONTENT OF STEEL WITH 14-MEV NEUTRONS.
ARCH. EISENHUETTENW., 35, 987-991 (OCTOBER 1964).
(GERMAN) (ENGLISH AND FRENCH SUMMARIES).
MITTEILUNG AUS DER VERSUCHSANSTALT DER HOESCH AG WESTFALENHUTTE, DORTMUND, GERMANY.

2649 FUJII, I. * MIYOSHI, K. * MUTO, H. * SHIMURA, K.
APPLICATION OF A FAST NEUTRON ACTIVATION METHOD TO THE DETERMINATION OF OXYGEN IN IRON AND STEEL.
ANAL. CHIM. ACTA, 34, 146-153 (FEBRUARY 1966).
(ENGLISH) (FRENCH AND GERMAN SUMMARIES). CENTRAL RESEARCH LABORATORY, TOKYO SHIBAURA ELECTRIC CO., LTD., KANAGAWA-KEN, TOKYO, JAPAN.

2652 PIERCE, T.B. * PECK, P.F. * HENRY, W.M.
THE RAPID DETERMINATION OF CARBON IN STEELS BY MEASUREMENT OF THE PROMPT RADIATION EMITTED DURING DEUTERON BOMBARDMENT.
ANALYST, 90, 339-345 (JUNE 1965). (ENGLISH).
ATOMIC ENERGY RESEARCH ESTABLISHMENT, HARWELL, DIDCOT, BERKS., ENGLAND.

2678 NICKEL, H. * ROTTMANN, J. * STOCKER, H.J. *
KOSTER-PFLUGMACHER, A. * FROHBERG, M.G.
DETERMINATION OF THE OXYGEN CONTENT OF STEEL AND METAL POWDERS WITH 14.5 MEV NEUTRONS.
ARCH. EISENHUETTENW., 35, 637-647 (JULY 1964).
(GERMAN) (ENGLISH AND FRENCH SUMMARIES). INSTITUT FUR REAKTORWERKSTOFFE, KERNFORSCHUNGSANLAGE JULICH, GERMANY.

2686 BENJAMIN, R.W. * BLAKE, K.R. * MORGAN, I.L.
HIGH SENSITIVITY OXYGEN ANALYSIS OF METALLIC
SAMPLES WITH FAST NEUTRONS.
ANAL. CHEM., 38, 947-949 (JUNE 1966). (ENGLISH).
TEXAS NUCLEAR CORP., AUSTIN, TEXAS.

2712 ROMMEL, H.
DETERMINATION OF BORON IN SILICON AND GERMANIUM BY
PROTON AND DEUTERON ACTIVATION.
ANAL. CHIM. ACTA, 34, NO. 4, 427-446 (1966).
(GERMAN). (ENGLISH AND FRENCH SUMMARIES).
DEUTSCHE AKADEMIE DER WISSENSCHAFTEN ZU BERLIN,
GERMANY.

2721 ALIMARIN, I.P. * YAKOVLEV, Y.V. *
SHCHULEPNIKOV, M.N. * PEREZHOGIN, G.P.
MEASUREMENT OF SMALL AMOUNTS OF IMPURITIES IN
THALLIUM, GALLIUM, PHOSPHORUS AND ANTIMONY BY
RADIOACTIVATION ANALYSIS.
AEC-TR-6466/1, 288-292, UNDATED. (ENGLISH
TRANSLATION). RUSSIA.

2734 STEELE, E.L.
DEVELOPMENT OF NEUTRON ACTIVATION ANALYSIS
PROCEDURES FOR THE DETERMINATION OF OXYGEN IN
POTASSIUM. QUARTERLY REPORT NO. 3, PERIOD ENDING
MARCH 31, 1964.
N64-27382, 19P., JUNE 19, 1964. (ENGLISH).
GENERAL ATOMIC DIVISION, GENERAL DYNAMICS
CORPORATION, SAN DIEGO, CALIF.

2764 BARIKOVA, Y.F. * MINAEV, V.M. * SAMOSADNYI, V.T.
DETERMINATION OF IMPURITIES IN STEEL BY
NEUTRON-ACTIVATION ANALYSIS.
ZAVODSK. LAB., 32, 47-49 (1966). (RUSSIAN).
RUSSIA.

2798 TWITTY, B.L. * FRITZ, K.M.
A RAPID DETERMINATION OF OXYGEN IN HIGH-PURITY
MAGNESIUM CHIPS BY NEUTRON ACTIVATION ANALYSIS.
NLCO-973, 23P., MAY 1966. (ENGLISH). NATIONAL
LEAD COMPANY OF OHIO.

2802 LEPETIT, H.
MICRODETERMINATION OF OXYGEN IN METALS BY
RADIOACTIVE REAGENTS AND BY ACTIVATION WITH FAST
NEUTRONS AT 14 MEV. (THESIS).
LYCEN-6524, 115P., JULY 21, 1965. (FRENCH). L
UNIVERSITE DE LYON, FRANCE.

2983 PERDIJON, J.
THE RAPID AND NONDESTRUCTIVE DETERMINATION OF
OXYGEN IN STEELS BY RADIOACTIVATION.
BULL. INFORM. A.T.E.N., NO. 57, SUPPL., 3-6
(JANUARY-FEBRUARY 1966). (FRENCH). CIVIL DES
MINES A LA S.A.M.E.S., FRANCE.

3059 RASMUSSEN, N.C. * THOMPSON, T.J.
NEUTRON AND GAMMA-RAY SPECTROSCOPY AND ACTIVATION
ANALYSIS. FINAL REPORT, JANUARY 1, 1961-JANUARY
1, 1966.
AD-633252, 176P., FEBRUARY 1966. (ENGLISH).
MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE,
MASSACHUSETTS.

3070 BENJAMIN, R.W. * ENGLAND, L.D. * BLAKE, K.R. *
MORGAN, I.L. * HOUSTON, C.D.
DEUTERON ACTIVATION ANALYSIS FOR C, N, AND O IN
HIGH-PURITY METALLIC SURFACES.
TRANS. AMER. NUCL. SOC., 9, 104 (JUNE 1966).
(ENGLISH). TEXAS NUCLEAR CORP., AUSTIN, TEXAS.

3073 ANDERSON, G.H. * KEMPCHINSKY, P.C. * LAVERTY, A.
THE DETERMINATION OF OXYGEN IN
BERYLLIUM-COMPARISON OF NEUTRON ACTIVATION AND
BROMINE-METHANOL METHODS.
TRANS. AMER. NUCL. SOC., 9, 107 (JUNE 1966).
(ENGLISH). GENERAL ATOMIC DIVISION, GENERAL
DYNAMICS CORP., SAN DIEGO, CALIFORNIA.

3085 GAHN, R.F. * ROSENBLUM, L.
ACCURACY OF THREE METHODS FOR DETERMINATION OF
OXYGEN IN POTASSIUM AT CONCENTRATIONS LESS THAN 20
PPM.
ANAL. CHEM., 38, 1014-1018 (JULY 1966).
(ENGLISH). LEWIS RESEARCH CENTER, NATIONAL
AERONAUTICS AND SPACE ADMINISTRATION, CLEVELAND,
OHIO.

3090 PERDIJON, J.
RAPID DETERMINATION OF OXYGEN IN METALS BY
RADIOACTIVATION.
REV. MET. (PARIS), 63, 27-32 (JANUARY 1966).
(FRENCH). S.A. DE MACHINES ELECTROSTATIQUES
(SAMES), GRENOBLE, FRANCE.

3357 TWITTY, B.L. * FRITZ, K.M.
THE DETERMINATION OF OXYGEN IN MAGNESIUM, STEEL, AND TITANIUM. INTERNAL STANDARD TECHNIQUES IN 14-MEV ACTIVATION ANALYSIS.
NLCO-979, 21P., JUNE 1, 1966. (ENGLISH). NATIONAL LEAD COMPANY OF OHIO, CINCINNATI, OHIO.

3361 LOBANOV, E.M. * ZVYAGIN, V.I. * ZVEREV, B.P. * BLINKOV, D.I.
DETERMINATION OF LIGHT ELEMENTS IN SILICON AND OTHER MATERIALS BY NEUTRON ACTIVATION.
AEC-TR-6639, 1-12. PROCEEDINGS OF THE FIRST ALL-UNION COORDINATING CONFERENCE, TASHKENT, 24-28 OCTOBER 1962. ISRAEL PROGRAM FOR SCIENTIFIC TRANSLATIONS, JERUSALEM, 1966. (ENGLISH TRANSLATION). INSTITUTE OF NUCLEAR PHYSICS, ACADEMY OF SCIENCES, UZBEK SSR.

3466 GARBRAH, B.W. * WHITLEY, J.E.
DETERMINATION OF BORON BY THERMAL NEUTRON CAPTURE GAMMA-RAY ANALYSIS.
ANAL. CHEM., 39, NO. 3, 345-349 (MARCH 1967). (ENGLISH). SCOTTISH RESEARCH REACTOR CENTER, EAST KILBRIDE, GLASGOW, SCOTLAND.

3502 CRAWFORD, G.I.
OXYGEN IN METALS.
ACTIVATION ANALYSIS, PRINCIPLES AND APPLICATIONS. LENIHAN, J.M.A., THOMSON, S.J. (EDS.), NEW YORK, ACADEMIC PRESS, 113-118, 1965. (ENGLISH). NATURAL PHILOSOPHY DEPARTMENT, THE UNIVERSITY, GLASGOW, SCOTLAND.

3721 ALBERT, P. * DEYRIS, M. * REVEL, G.
DETERMINATION OF OXYGEN IN ALUMINUM AND ZIRCONIUM BY IRRADIATION WITH HE-3 IONS.
COMPT. REND., SER. C, 262, 1774-1777 (JUNE 20, 1966). (FRENCH). CENTRE D ETUDES DE CHIMIE METALLURGIQUE DU C.N.R.S., VITRY-SUR-SEINE, VAL-DE-MARNE, FRANCE.

3722 DEYRIS, M. * ALBERT, P.
POSSIBILITIES FOR DETERMINATION OF OXYGEN IN ALUMINUM BY IRRADIATIONWITH ALPHA PARTICLES.
COMPT. REND., SER. C, 262, 1675-1678 (JUNE 13, 1966). (FRENCH). CENTRE D ETUDES DE CHIMIE METALLURGIQUE DU C.N.R.S., VITRY-SUR-SEINE, VAL-DE-MARNE, FRANCE.

3727 PETIT, J. * SCHAUB, B, * ENGELMANN, C, ZONE FUSION AND ACTIVATION ANALYSIS. BULL. INFORM. SCI. TECH. (PARIS), NO. 62, 39-42 (JUNE 1962). (FRENCH), SERVICE DE RECHERCHES DE METALLURGIE PHYSIQUE ET CHIMIQUE, FRANCE.

3746 SCHRAMEL. P. * MUNZER, H. DETECTION OF OXYGEN IN METALS, PARTICULARLY IN STEEL, BY ACTIVATION ANALYSIS WITH 14,4-MEV NEUTRONS. ACTA PHYS. AUSTR., 23, 266-271 (1966). (GERMAN), INSTITUT FUR RADIUMFORSCHUNG UND KERNPHYSIK, WIEN, AUSTRIA.

3768 FUJII, I. * MUTO, H. 14 MEV NEUTRON ACTIVATION ANALYSIS USING A NEW ANALYTICAL INSTRUMENTT, PROC. JAPAN CONFERENCE RADIOISOTOPES, 5TH, NO. 3, 170-172 (1963), (JAPANESE), TOKYO SHIBAURA ELECTRIC CO. LTD., JAPAN.

3771 KOBAYASHI, M. * SAWAI, T. * NAGATSUKA, S. * MAEDA, S. ACTIVATION ANALYSIS OF OXYGEN BY MEANS OF (GAMMA, NEUTRON) NUCLEAR REACTION, PROC. JAPAN CONFERENCE RADIOISOTOPES, 5TH, NO. 3, 179-181 (1963), (JAPANESE), TOKYO METROPOLITAN ISOTOPE CENTER, JAPAN.

3976 BLAKE, K.R. * PARKER, C.V., JR. * ENGLAND, L.D. * MORGAN, I.L. ELEMENTAL TRACE ANLYSIS BY CHARGED PARTICLE AND NEUTRON ACTIVATION. ORO-2980-14, 44P, JULY 1, 1966, (ENGLISH). TAXAS NUCLEAR CORPORATION, AUSTIN, TEXAS.

3977 HOLM, D.M. * BASHAJIAN, J.A, * SANDERS, W.M, OBSERVATION OF THE MICROSCOPIC DISTRIBUTION OF OXYGEN AND CARBON IN METALS BY HE-3 ACTIVATION. LA-3515, 16P., MAY 10, 1966, (ENGLISH). LOS ALAMOS SCIENTIFIC LABORATORY OF THE UNIVERSITY OF CALIFORNIA, LOS ALAMOS, NEW MEXICO.

3981 TWITTY, R.L. * FRITZ, K,M. INTERNAL STANDARD TECHNIQUES FOR DETERMINATION OF OXYGEN IN MAGNESIUM, STEEL, AND TITANIUM BY ACTIVATION ANALYSIS. ANAL. CHEM., 39, NO. 4, 527-529 (1967). (ENGLISH). NATIONAL LEAD CO, OF OHIO, CINCINNATI, OHIO.

DETERMINATION OF LIGHT ELEMENTS IN METALS - ACCESSION NUMBERS

3986 AUMANN, D.C. * BORN, H.J. * HENKELMANN, R.
USE OF FAST REACTOR NEUTRONS FOR RAPID AND
NONDESTRUCTIVE TRACE ANALYSIS, EXPECIALLY OF
OXYGEN.
Z. ANAL. CHEM., 221, 101-108 (1966), (GERMAN)
(ENGLISH SUMMARY). INSTITUT FUR RADIOCHEMIE,
TECHNISCHE HOCHSCHULE MUNCHEN, GERMANY.

3992 WILKNISS, P.E. * BORN, H.J.
ACTIVATION ANALYSIS OF OXYGEN AT THE SURFACE OF
SOLIDS.
INTERN. J. APPL. RADIATION ISOTOPES, 18, 57-64
(JANUARY 1967), (GERMAN) (ENGLISH, FRENCH AND
RUSSIAN SUMMARIES). INSTITUT FUR RADIOCHEMIE DER
TECHNISCHEN HOCHSCHULE MUNCHEN, GERMANY.

4211 ALBERT, P.
RADIOCHEMICAL METHODS IN ANALYTICAL CHEMISTRY.
ACTIVATION ANALYSIS WITH GAMMA RAY PHOTONS AND
CHARGED PARTICLES.
CHIMIA, 21, NO. 3, 116-125 (1967), (FRENCH)
(ENGLISH SUMMARY). CENTRE D ETUDES DE CHIMIE
METALLURGIQUE DU C.N.R.S., VITRY, FRANCE.

4226 RYAN, V.A. * GREEN, J.L. * LOWENHAUPT, E.H.
OXYGEN AND CARBON CONTENT OF LANTHANIDE AND
ACTINIDE METALS OBTAINED BY REDUCTION OF WET AND
DRY PRODUCED TRIFLUORIDES.
J. INORG. NUCL. CHEM., 29, 581-584 (FEBRUARY
1967). (ENGLISH). DEPARTMENT OF CHEMISTRY,
UNIVERSITY OF WYOMING, LARAMIE, WYOMING.

4260 LEPETIT, H. * TOUSSET, J.
PRECISION AND CALIBRATION IN THE DETERMINATION OF
OXYGEN BY NEUTRONS AT 14 MEV.
JOURNEE DE RADIOCHIMIE ANALYTIQUE, 39-76, 1965.
(FRENCH). INSTITUT DE PHYSIQUE NUCLEAIRE DE LYON,
FRANCE.

4277 DOROSH, M.M * MAZYUKEVICH, N.P. *
SHKODA-ULYANOV, V.A.
ANALYZING THE OXYGEN CONTENT OF CERTAIN METALS BY
RECORDING THE DELAYED NEUTRONS PRODUCED IN THE
O-18 (GAMMA, P) N-17 REACTION.
SOVIET ATOMIC ENERGY, 807-810 (SEPT. 1966).
(ENGLISH TRANSLATION). RUSSIA.

4300 GOBRECHT, H. * TAUSEND, A. * BRATTER, P. * WILLERS, G.
DETERMINATION OF SULPHUR AND ANTIMONY IN SELENIUM BY EPITHERMAL NEUTRON ACTIVATION ANALYSIS.
SOLID STATE COMMUN., 4, 311-314 (JUNE 1966). (ENGLISH). PHYSIKALISCHES INSTITUT DER TECHNISCHEN UNIVERSITAT BERLIN AND HAHN-MEITNER-INSTITUT FUR KERNFORSCHUNG BERLIN, GERMANY.

4386 PERSIANI, C. * SPIRA, J. * BASTIAN, R.
PHOTON-ACTIVATION ANALYSIS OF CAESIUM.
TALANTA, 14, NO. 5, 565-573 (1967). (ENGLISH) (GERMAN AND FRENCH SUMMARIES). REPUBLIC AVIATION CORP., FARMINGDALE, N.Y., AND MONTEFIORE HOSPITAL, BRONX, N.Y.

5238 MOLLER, E. * NILSSON, L. * STARFELT, N.
MICROANALYSIS OF LIGHT ELEMENTS BY MEANS OF (D, N) REACTIONS.
NUCL. INSTRUM. METHODS, 50, 270-276 (1967). (ENGLISH). AB ATOMENERGI, STUDSVIK, NYKOPING, SWEDEN.

5321 ANDREEV, A.V. * BARIT, I.Y. * MUSAELYAN, R.M. * PRONMAN, I.M.
DETERMINATION OF OXYGEN IN MOLYBDENUM BY ACTIVATION WITH FAST NEUTRONS.
J. ANAL. CHEM., USSR, 21, NO. 12, 1292-1295 (DECEMBER 1966). (ENGLISH TRANSLATION). RUSSIA.

5380 FUJII, I. * MUTO, H.
A DIRECT READ-OUT SYSTEM FOR FAST NEUTRON ACTIVATION ANALYSIS FOR OXYGEN IN STEELS.
ANAL. CHIM. ACTA, 39, NO. 3, 329-333 (1967). (ENGLISH) (FRENCH AND GERMAN SUMMARIES). CENTRAL RESEARCH LABORATORY, TOKYO SHIBAURA ELECTRIC CO., LTD., KOMUKAI, KAWASAKI, JAPAN.

5408 ARMIJO, J.S. * ROSENBAUM, H.S.
BORON DETECTION IN METALS BY ALPHA-PARTICLE TRACKING.
J. APPL. PHYS., 38, 2064-2069 (APRIL 1967). (ENGLISH). GENERAL ELECTRIC COMPANY, VALLECITOS NUCLEAR CENTER, NUCLEONICS LABORATORY, PLEASANTON, CALIF.

5409 GIBBONS, D. * OLIVE, G. * SEVIER, P. *
DEUTSCHMAN, J.E.
DETERMINATION OF THE OXYGEN CONTENT OF ALUMINIUM
BY 14 MEV-NEUTRON RADIOACTIVATION ANALYSIS.
J. INST. METALS, 95, NO. 9, 280-283 (1967).
(ENGLISH). WANTAGE RESEARCH LABORATORY, AERE,
WANTAGE, BERKS., ALUMINIUM LABORATORIES, LTD.,
BANBURY, OXON., ENGLAND AND ALUMINUM COMPANY OF
CANADA, ARVIDA, QUEBEC, CANADA.

5429 DRAGNEV, T.N.
NUCLEAR METHODS FOR DETERMINING BORON IN SILICON.
COMPT. REND. ACAD. BULG. SCI., 19, 711-714 (1966).
(BULGARIAN). BULGARIA.

5431 FUJII, I. * MUTO, H.
DETERMINATION OF OXYGEN IN TITANIUM METAL BY A
FAST NEUTRON ACTIVATION METHOD.
BUNSEKI KAGAKU, 15, 856-858 (AUG. 1966).
(JAPANESE) (ENGLISH SUMMARY). CENTRAL RESEARCH
LABORATORY, TOKYO SHIBAURA ELECTRIC CO.,
KAWASAKI-SHI, JAPAN.

5432 FUJII, I. * TAKADA, K. * MUTO, H.
DETERMINATION OF OXYGEN IN ALUMINUM BY A FAST
NEUTRON ACTIVATION METHOD.
BUNSEKI, KAGAKU, 15, NO. 11, 1239-1245 (1966).
(JAPANESE) (ENGLISH SUMMARY). TOSHIBA CENTRAL
RESEARCH LABORATORY, KAWASAKI AND NIPPON LIGHT
METAL RESEARCH LABORATORY, SHIZUOKA, JAPAN.

5450 STOLL, N. * WAGNER, A. * GOEDERT, L.
INVESTIGATIONS OF THE INDUSTRIAL APPLICATION
POSSIBILITIES OF ACTIVATION ANALYSIS FOR THE
DETERMINATION OF OXYGEN AND EVENTUALLY OF NITROGEN
AND HYDROGEN IN STEEL. PART I. BIBLIOGRAPHICAL
REPORT.
EUR-3161.F (VOL. 1), 48P., NOVEMBER 1966.
(FRENCH). ACIERIES REUNIES DE
BURBACH-EICH-DUDELANGE S.A., LUXEMBOURG, BELGIUM.

5451 STOLL, N. * WAGNER, A. * GOEDERT, L.
INVESTIGATIONS OF THE INDUSTRIAL APPLICATION
POSSIBILITIES OF ACTIVATION ANALYSIS FOR THE
DETERMINATION OF OXYGEN AND EVENTUALLY NITROGEN
AND HYDROGEN IN STEEL. PART II. DESCRIPTION AND
RESULTS OF THE TESTS.
EUR-3161.F (VOL. 2), 69P., NOVEMBER 1966.
(FRENCH). ACIERIES REUNIES DE
BURBACH-EICH-DUDELANGE S.A., LUXEMBOURG, BELGIUM.

5452 STOLL, N. * WAGNER, A. * GOEDERT, L.
INVESTIGATIONS ON THE INDUSTRIAL APPLICATION POSSIBILITIES OF ACTIVATION ANALYSIS FOR THE DETERMINATION OF OXYGEN AND EVENTUALLY OF NITROGEN AND HYDROGEN IN STEEL. PART III. DISCUSSION OF THE TESTS AND CONCLUSIONS TO BE DEDUCED FROM THE
EUR-3161.F (VOL. 3), 28P., NOVEMBER 1966.
(FRENCH). ACIERIES REUNIES DE BURBACH-EICH-DUDELANGE S.A., LUXEMBOURG, BELGIUM.

5708 PERDIJON, J.
OXYGEN DETERMINATION IN STEEL BY ACTIVATION ANALYSIS. A RAPID NON-DESTRUCTIVE METHOD.
ATOMWIRTSCHAFT, 12, 131-133 (MARCH 1967).
(GERMAN). INGENIEUR CIVIL DES MINES, GRENOBLE, FRANCE.

5772 HOSTE, J. * DE SOETE, D. * SPEECKE, A.
THE DETERMINATION OF OXYGEN IN METALS BY 14-MEV NEUTRON ACTIVATION ANALYSIS.
EUR-3565E, 72P., JUNE 23, 1967. (ENGLISH).
UNIVERSITY OF GHENT, GHENT, BELGIUM.

5781 ANDREEV, A.V. * BARIT, I.Y. * PRONMAN, I.M.
DETERMINATION OF THE OXYGEN IN NIOBIUM AND TITANIUM BY THE METHOD OF ACTIVATION WITH FAST NEUTRONS.
INDUSTRIAL LABORATORY, 33, NO. 9, 1306-1308
(SEPTEMBER 1967). (ENGLISH TRANSLATION). STATE SCIENTIFIC-RESEARCH AND PLANNING INSTITUTE OF RARE METAL PRODUCTION, RUSSIA.

5782 BARIT, I.Y. * KUDINOV, B.S. * MUSAFLYAN, R.M. * PRONMAN, I.M.
DETERMINATION OF NITROGEN IN PURE NIOBIUM BY THE METHOD OF ACTIVATION WITH NEUTRONS WITH ENERGY OF 14 MEV.
INDUSTRIAL LABORATORY, 33, NO. 9, 1309-1311
(SEPTEMBER 1967). (ENGLISH TRANSLATION). RUSSIA.

5919 FURUKAWA, Y. * KOYAMA, M. * YUKI, M.
DETERMINATION OF BORON CONTENT IN SEVERAL MEDIUMS BY PROMPT GAMMA RAY ANALYSIS.
RADIOISOTOPES (TOKYO), 16, 499-503 (OCTOBER 1967).
(ENGLISH) (JAPANESE SUMMARY). ATOMIC ENERGY RESEARCH LABORATORY OF MUSASHI INSTITUTE OF TECHNOLOGY, JAPAN.

5921 SAWAI, T. * ALBERT, P.
ACTIVATION ANALYSIS OF OXYGEN IN ALUMINIUM BY USING ALPHA AND HE-3 PARTICLES.
RADIOISOTOPES (TOKYO), 16, 509-513 (OCTOBER 1967). (JAPANESE) (ENGLISH SUMMARY). TOKYO METROPOLITAN ISOTOPE RESEARCH CENTER, JAPAN AND CENTRE D ETUDES DE CHIMIE METALLURGIQUE DU C.N.R.S., FRANCE.

5932 HUGHES, J.D.H. * ROGERS, G.T.
HIGH-RESOLUTION AUTORADIOGRAPHY OF TRACE BORON IN METALS AND SOLIDS.
J. INST. METALS, 95, 299-302 (OCTOBER 1967). (ENGLISH). WANTAGE RESEARCH LABORATORY, AERE, WANTAGE, BERKS., ENGLAND.

5938 REVEL, G. * ALBERT, P.
DETERMINATION OF OXYGEN IN ZIRCONIUM, MOLYBDENUM, HAFNIUM, AND TUNGSTEN BY IRRADIATION WITH HE-3 4.
COMPT. REND., SER. C, 265, 1443-1446 (DECEMBER 18, 1967). (FRENCH). CENTRE D ETUDES DE CHIMIE METALLURGIQUE DU C.N.R.S., VITRY-SUR-SEINE, VAL-DE-MARNE, FRANCE.

5954 REVEL, G. * CHAUDRON, T. * DEBRUN, J.L. * ALBERT, P.
DETERMINATION OF CARBON IN PURE IRON BY IRRADIATION WITH GAMMA PHOTONS.
COMPT. REND., SER. C, 226, 322-324 (JANUARY 29, 1968). (FRENCH). CENTRE D ETUDES DE CHIMIE METALLURGIQUE, VITRY, VAL-DE-MARNE, FRANCE.

6053 ALEKSANDROVA, G.I. * DEMIDOV, A.M. * KOTELNIKOV, G.A. * PLASHAKOVA, G.P. * SUKHOV, G.V. * CHOPOROV, D.Y. * SHMANENKOVA, G.I.
DETERMINATION OF OXYGEN CONTENT IN GERMANIUM AND SILICON BY ACTIVATION WITH HE-3 IONS.
SOVIET ATOMIC ENERGY, 23, NO. 2, 787-801 (1967). (ENGLISH TRANSLATION). RUSSIA.

6072 ALEKSANDROVA, G.I. * DEMIDOV, A.M. * KOTELNIKOV, G.A. * PLESHAKOVA, G.P. * SUKHOV, G.V. * CHOPOROV, D.Y. * SHMANENKOVA, G.I.
DETERMINATION OF THE OXYGEN CONTENT IN GERMANIUM AND SILICON BY ACTIVATION BY HE-3 IONS.
IAE-1165, 15P., 1966. (RUSSIAN). INSTITUT ATOMNOI ENERGII, GOSUDARSTVENNYI KOMITET PO ISPOLZOVANIYU ATOMNOI ENERGII SSSR, MOSCOW, RUSSIA.

6086 NADKARNI, R.A. * HALDAR, B.C.
DETERMINATION OF SILICON, PHOSPHORUS AND SULFUR IN
ALLOY STEEL BY NEUTRON ACTIVATION ANALYSIS.
ANAL. CHIM. ACTA, 42, 279-284 (AUGUST 1968).
(ENGLISH) (FRENCH AND GERMAN SUMMARIES).
INORGANIC AND NUCLEAR CHEMISTRY LABORATORY,
INSTITUTE OF SCIENCE, BOMBAY, INDIA.

6226 CALI, J.P. * LOWE, L.F. * REILLY, E.M. *
THOMPSON, H.D.
DETAILED PROCEDURES FOR THE DETERMINATION OF
SEVERAL ELEMENTS BY NEUTRON ACTIVATION ANALYSIS.
ERD-CRRC-TM-57-103, 29P., FEBRUARY 1957,
(ENGLISH). AIR FORCE CAMBRDIGE RESEARCH CENTER,
BEDFORD, MASS.

6398 VAN GRIEKEN, R. * GIJBELS, R. * SPEECKE, A. *
HOSTE, J.
INTERNAL STANDARD ACTIVATION ANALYSIS OF SILICON
IN STEEL.
ANAL. CHIM. ACTA, 43, NO. 3, 381-395 (1968).
(ENGLISH) (FRENCH AND GERMAN SUMMARIES).
INSTITUTE FOR NUCLEAR SCIENCES, GHENT UNIVERSITY,
BELGIUM.

6410 ALBERT, P. * BLOURI, J. * CLEYRERGUE, C. *
DESCHAMPS, N. * LE HERICY, J.
CONTRIBUTION TO THE STUDY OF DETERMINATION BY
RADIOACTIVATION OF SULFUR AND PHOSPHORUS IN VERY
SMALL CONCENTRATION METALS OF VERY HIGH PURITY
(ALUMINUM, MAGNESIUM, COPPER, IRON, NICKEL).
J. RADIOANAL. CHEM., 1, 297-311 (1968). (FRENCH)
(ENGLISH SUMMARY). LABORATOIRE D ANALYSE PAR
ACTIVATION DU CENTRE D ETUDES DE CHIMIE
METALLURGIQUE DU CNRS, VITRY, FRANCE.

6412 ALBERT, P. * BLOURI, J. * CLEYRERGUE, C. *
DESCHAMPS, N. * LE HERICY, J.
CONTRIBUTION TO THE STUDY OF DETERMINATION BY
RADIOACTIVATION OF SULFUR AND PHOSPHORUS IN VERY
SMALL CONCENTRATIONS IN METALS OF VERY HIGH PURITY
(ALUMINUM, MAGNESIUM, COPPER, IRON, NICKEL).
J. RADIOANAL. CHEM., 1, 389-396 (1968). (FRENCH)
(ENGLISH SUMMARY). LABORATOIRE D ANALYSE PAR
ACTIVATION DU CENTRE D ETUDES DE CHIMIE
METALLURGIQUE DU CNRS, VITRY, FRANCE.

6446 BALLAUX, C. * DAMS, R. * HOSTE, J.
NEUTRON ACTIVATION ANALYSIS OF HIGH PURITY SELENIUM. PART III. DETERMINATION OF PHOSPHORUS, SULFUR, AND CHLORINE.
ANAL. CHIM. ACTA, 43, NO. 1, 1-11 (1968), (ENGLISH) (FRENCH AND GERMAN SUMMARIES), INSTITUTE FOR NUCLEAR SCIENCES, GHENT UNIVERSITY, GHENT, BELGIUM.

6568 ALBERT, P. * BLOURI, J. * CLEYRERGUE, C. * DESCHAMPS, N. * LE HERICY, J.
CONTRIBUTION TO THE STUDY OF THE DETERMINATION BY RADIOACTIVATION OF SULFUR AND PHOSPHOROUS ON VERY LOW CONCENTRATES OF METALS OF VERY HIGH PURITY (ALUMINUM, MAGNESIUM, COPPER, IRON, NICKEL).
J. RADIOANAL. CHEM., 1, 431-441 (1968), (FRENCH) (ENGLISH SUMMARY). LABORATOIRE D ANALYSE PAR ACTIVATION DU CENTRE D ETUDES DE CHIMIE METALLURGIQUE DU CNRS VITRY, FRANCE.

6572 BOGANCS, J. * QUITTNER, P. * SZABO, E.
DETERMINATION OF CONTAMINANTS IN HIGH-PURITY SILICON BY NONDESTRUCTIVE ACTIVATION ANALYSIS.
SOVIET ATOMIC ENERGY, 24, NO. 5, 520-523 (MAY 1968). (ENGLISH TRANSLATION). CENTRAL INSTITUTE FOR PHYSICAL RESEARCH, HUNGARIAN ACADEMY OF SCIENCES, BUDAPEST, HUNGARY.

6581 SCHUSTER, E. * WOHLLEBEN, K.
NONDESTRUCTIVE DETERMINATION OF CARBON IN SILICON BY THE REACTION C-12(D,N)N-13.
PROCEEDINGS OF THE 2ND CONFERENCE ON PRACTICAL ASPECTS OF ACTIVATION ANALYSIS WITH CHARGED PARTICLES, LIEGE (BELGIUM), SEPTEMBER 21-22, 1967. EBERT, H.G. (ED.). BRUSSELS, EUROPEAN ATOMIC ENERGY COMMUNITY (EURATOM), 45-63, 1968. (GERMAN). FORSCHUNGSLABORATORIUM DER SIEMENS AG, ERLANGEN.

6590 REVEL, G. * ALBERT, P.
DETERMINATION OF OXYGEN IN ZIRCONIUM, MOLYBDENUM, HAFNIUM, AND TUNGSTEN BY IRRADIATION WITH HE-3 AND HE-4 PARTICLES.
PROCEEDINGS OF THE 2ND CONFERENCE ON PRACTICAL ASPECTS OF ACTIVATION ANALYSIS WITH CHARGED PARTICLES, LIEGE (BELGIUM), SEPTEMBER 21-22, 1967. EBERT, H.G. (ED.). BRUSSELS, EUROPEAN ATOMIC ENERGY COMMUNITY (EURATOM), 261-275, 1968. (FRENCH). C.E.C.M., VITRY, SEINE DU C.N.R.S., FRANCE.

6591 BARRANDON, J.N. * DEBRUN, J.L. * ALBERT, P.
DETERMINATION OF LOW OXYGEN CONTENT IN IRON, NICKEL, AND CHROME BY ACTIVATION WITH ALPHA PARTICLES.
PROCEEDINGS OF THE 2ND CONFERENCE ON PRACTICAL ASPECTS OF ACTIVATION ANALYSIS WITH CHARGED PARTICLES, LIEGE (BELGIUM), SEPTEMBER 21-22, 1967. EBERT, H.G. (ED.). BRUSSELS, EUROPEAN ATOMIC ENERGY COMMUNITY (EURATOM), 277-291, 1968, (FRENCH). LABORATOIRE D ANALYSE PAR ACTIVATION DU CENTRE D ETUDES DE CHIMIE METALLURGIQUE DU C.N.R.S., VITRY, SEINE.

6593 ENGELMANN, C. * FRITZ, B. * GOSSET, J. * GRAEFF, P. * LOEUILLET, M.
DETERMINATION OF LOW QUANTITIES OF OXYGEN AND CARBON BY ACTIVATION WITH PHOTONS AND ALPHA PARTICLES.
PROCEEDINGS OF THE 2ND CONFERENCE ON PRACTICAL ASPECTS OF ACTIVATION ANALYSIS WITH CHARGED PARTICLES, LIEGE (BELGIUM), SEPTEMBER 21-22, 1967. EBERT, H.G. (ED.). BRUSSELS, EUROPEAN ATOMIC ENERGY COMMUNITY (EURATOM), 319-350, 1968, (FRENCH) (ENGLISH SUMMARY). C.E.A. FRANCE, C.E.N. SACLAY.

6595 CUYPERS, M. * QUAGLIA, L. * ROBAYE, G. * DUMONT, P. * BARRANDON, J.N.
RESEARCH ON THE REACTION O-16(D,P) PRODUCT WITH THE THIN OXYGEN LAYER ON THE SURFACE OF METALS.
PROCEEDINGS OF THE 2ND CONFERENCE ON PRACTICAL ASPECTS OF ACTIVATION ANALYSIS WITH CHARGED PARTICLES, LIEGE (BELGIUM), SEPTEMBER 21-22, 1967. EBERT, H.G. (ED.). BRUSSELS, EUROPEAN ATOMIC ENERGY COMMUNITY (EURATOM), 371-378, 1968, (FRENCH) (ENGLISH SUMMARY), LABORATOIRE D APPLICATIONS DES RADIOELEMENTS, LABORATOIRE VAN DE GRAAFF, UNIVERSITE DE LIEGE AND CENTRE D ETUDE DE CHIMIE METALLURGIQUE, VITRY SUR SEINE, FRANCE.

6694 BRUNE, D. * JIRLOW, K.
DETERMINATION OF OXYGEN IN ALUMINIUM BY MEANS OF 14 MEV NEUTRONS WITH AN ACCOUNT OF FLUX ATTENUATION IN THE SAMPLE.
J. RADIOANALYTICAL CHEMISTRY, 2, 49-54 (1969), (ENGLISH). AB ATOMENERGI, STOCKHOLM, STUDSVIK, SWEDEN.

6705 ABDURAKHMANOVA, S.R. * KIREEV, V.A. * NAVALIKHIN, L.V. * TALANIN, Y.N.
DETERMINATION OF OXYGEN IN MOLYBDENUM SAMPLES BY ACTIVATION WITH NEUTRONS HAVING AN ENERGY OF 14 MEV.
J. ANAL. CHEM., USSR, 23, NO. 8, 1043-1046 (AUGUST 1968). (ENGLISH TRANSLATION), INSTITUTE OF NUCLEAR PHYSICS, ACADEMY OF SCIENCES OF THE UZBEK SSR, TASHKENT.

6722 DEL MILAGRO PEREZ, M.
ANALYTICAL CONTROL OF GASES IN METALS OF NUCLEAR INTEREST.
ENERG. NUCL. (MADRID), 11, 537-548 (NOVEMBER-DECEMBER 1967). (SPANISH), DIRECCION DE QUIMICA E ISOTOPOS, DIVISION DE QUIMICA ANALITCA. SECCION DE ANALISIS IONICO. J.E.N.

6723 VAN GRIEKEN, R. * GIJBELS, R. * SPEECKE, A. * HOSTE, J.
THE DETERMINATION OF SILICON IN STEEL BY 14-MEV NEUTRON ACTIVATION ANALYSIS.
ANAL. CHIM. ACTA, 43, NO. 2, 199-209 (1968). (ENGLISH) (FRENCH AND GERMAN SUMMARIES), INSTITUTE FOR NUCLEAR SCIENCES, GHENT UNIVERSITY, GHENT, BELGIUM.

6728 GIJBELS, R. * SPEECKE, A. * HOSTE, J.
AN OXYGEN STANDARD FOR THE DETERMINATION OF OXYGEN IN STEEL BY 14-MEV NEUTRON ACTIVATION ANALYSIS.
ANAL. CHIM. ACTA, 43, NO. 2, 183-198 (1968). (ENGLISH) (FRENCH AND GERMAN SUMMARIES), INSTITUTE FOR NUCLEAR SCIENCES, GHENT UNIVERSITY, GHENT, BELGIUM.

6736 SCHUSTER, E. * WOHLLEBEN, K.
NON-DESTRUCTIVE DETERMINATION OF CARBON IN SILICON THROUGH THE REACTION C-12(D,N)N-13.
Z. ANAL. CHEM., 240, 175-183 (1968). (GERMAN) (ENGLISH SUMMARY), FORSCHUNGSLABORATORIUM DER SIEMENS AG, ERLANGEN.

6742 BAKER, C.A. * WILLIAMS, D.R.
PHOTON ACTIVATION ANALYSIS FOR CARBON AND OXYGEN.
TALANTA, 15, NO. 11, 1143-1151 (1968). (ENGLISH) (GERMAN AND FRENCH SUMMARIES), ANALYTICAL SCIENCES DIVISION, AERE, HARWELL, DIDCOT, BERKS., ENGLAND.

6750 ANDERSEN, G.H.
THE DETERMINATION OF OXYGEN IN TITANIUM AND REFRACTORY METALS BY ACTIVATION ANALYSIS.
NUCLEONICS IN AEROSPACE, POLISHUK, P. (ED.), NEW YORK, PLENUM PRESS, 317-322, 1968. (ENGLISH). GENERAL ATOMIC DIVISION OF GENERAL DYNAMICS CORPORATION, SAN DIEGO, CALIF.

6752 HOLM, D.M. * SANDERS, W.M. * BRISCOE, W.L. * PARKER, J.L.
MEASUREMENT OF THE SURFACE DISTRIBUTION OF CARBON AND OXYGEN BY HE-3 ACTIVATION AND AUTORADIOGRAPHY.
NUCLEONICS IN AEROSPACE, POLISHUK, P. (ED.), NEW YORK, PLENUM PRESS, 306-313, 1968. (ENGLISH). UNIVERSITY OF CALIFORNIA, LOS ALAMOS SCIENTIFIC LABORATORY, LOS ALAMOS, NEW MEXICO.

6844 BARWINSKI, A. * BUCZEK, A. * GORSKI, L. * JANCZYSZYN, J. * KWIECINSKI, S. * LOSKA, L.
ACTIVATION ANALYSIS OF CHROMIUM, SILICON, NICKEL, TUNGSTEN IN ALLOYS BY USING A NEUTRON GENERATOR.
ISOTOPENPRAXIS, 4, 15-19 (JANUARY 1968). (GERMAN). INSTITUT FUR KERNTECHNIK DER AKADEMIE FUR BERGBAU UND HUTTENWESEN, KRAKOW.

6856 MIYAGAWA, K. * ICHIJIMA, I. * ASAI, A. * NOMURA, E. * MISHIMA, I.
THE DETERMINATION OF OXYGEN IN STEEL BY THE ACTIVATION ANALYSIS WITH FAST NEUTRONS.
THE 9TH JAPAN CONFERENCE ON RADIOISOTOPES (ABSTRACTS OF PAPERS), NIPPON TOSHI CENTER, KOZIMACHI KAIKAN, MAY 13-15, 1969. PAPER A/M-6, 56-57, 1969. (ENGLISH). FUJI IRON AND STEEL CO., LTD., HIROHATA WORKS.

6978 COSGROVE, J.F.
ROUTINE DETERMINATION OF MAJOR COMPONENTS BY ACTIVATION ANALYSIS.
NBS SPEC. PUBL. 312, VOL. I, MODERN TRENDS IN ACTIVATION ANALYSIS, 457-459, JUNE 1969. (ENGLISH). THE BAYSIDE LABORATORY, RESEARCH CENTER OF GENERAL TELEPHONE AND ELECTRONICS LABORATORIES INC., BAYSIDE, N.Y.

7011 BUTLER, J.W. * WOLICKI, E.A,
SURFACE ANALYSIS OF GOLD AND PLATINUM DISKS BY ACTIVATION METHODS AND BY PROMPT RADIATION FROM NUCLEAR REACTIONS,
NBS SPEC. PUBL, 312, VOL, II. MODERN TRENDS IN ACTIVATION ANALYSIS, 791-793, JUNE 1969,
(ENGLISH). NUCLEAR PHYSICS DIVISION, U.S. NAVAL RESEARCH LABORATORY, WASHINGTON, D.C.

7012 BARRANDON, J.N. * ALBERT, P,
DETERMINATION OF OXYGEN PRESENT AT THE SURFACE OF METALS BY IRRADIATION WITH 2 MEV TRITONS,
NBS SPEC. PUBL, 312, VOL. II. MODERN TRENDS IN ACTIVATION ANALYSIS, 794-801, JUNE 1969,
(ENGLISH). CNRS-C.E.C.M., VITRY, FRANCE.

7015 ENGELMANN, C. * GOSSET, J, * LOEUILLET, M, * MARSCHAL, A. * OSSART, P, * BOISSIER, M,
EXAMPLES OF DETERMINATION OF LIGHT ELEMENTS IN VARIOUS HIGH PURITY MATERIALS, BY GAMMA PHOTON AND CHARGED PARTICLE ACTIVATION,
NBS SPEC. PUBL, 312, VOL. II. MODERN TRENDS IN ACTIVATION ANALYSIS, 819-828, JUNE 1969,
(ENGLISH). CENTRE D ETUDES NUCLEAIRES DE SACLAY, DEPARTMENTE DE METALLURGIE, GIF S/YVETTE (ESSONNE), FRANCE.

7017 MACKINTOSH, W.D. * JERVIS, R.E.
PHOTON ACTIVATION ANALYSIS OF OXYGEN AND CARBON IN A EUTECTIC MIXTURE OF LEAD AND BISMUTH USING A LINAC.
NBS SPEC. PUBL, 312, VOL, II, MODERN TRENDS IN ACTIVATION ANALYSIS, 835-837, JUNE 1969,
(ENGLISH). ATOMIC ENERGY OF CANADA LTD., ONTARIO, CANADA AND UNIVERSITY OF TORONTO, TORONTO, CANADA.

7018 REVEL, G. * CHAUDRON, T, * DEBRUN, J.L. * ALBERT, P,
DETERMINATION OF CARBON IN HIGH PURITY IRON BY IRRADIATION IN PHOTONS,
NBS SPEC. PUBL, 312, VOL. II. MODERN TRENDS IN ACTIVATION ANALYSIS, 838-841, JUNE 1969,
(ENGLISH). CNRS-C.E.C.M., VITRY, FRANCE.

7019 NOZAKI, T. * YATSURUGI, Y. * AKIYAMA, N. * IMAI, I.
CHARGED PARTICLE ACTIVATION ANALYSIS FOR CARBON, NITROGEN, AND OXYGEN IN SEMICONDUCTOR SILICON.
NBS SPEC. PUBL. 312, VOL. II. MODERN TRENDS IN ACTIVATION ANALYSIS, 842-846, JUNE 1969, (ENGLISH). THE INSTITUTE OF PHYSICAL AND CHEMICAL RESEARCH, YAMAMOTO-MACHI, SAITAMA, AND KOMATSU ELECTRONIC METALS CO., LTD., HIRATSUKA, KANAGAWA, JAPAN.

7076 GIJBELS, R. * SPEECKE, A. * HOSTE, J.
AN OXYGEN STANDARD FOR THE DETERMINATION OF OXYGEN IN STEEL BY 14 MEV NEUTRON ACTIVATION ANALYSIS.
NBS SPEC. PUBL. 312, VOL. II. MODERN TRENDS IN ACTIVATION ANALYSIS, 1298-1305, JUNE 1969, (ENGLISH). INSTITUTE FOR NUCLEAR SCIENCES, GHENT UNIVERSITY, PROEFUINSTRATT, GHENT, BELGIUM.

7097 CHIBA, M.
ACTIVATION ANALYSIS OF OXYGEN IN METALLIC BERYLLIUM BY FAST NEUTRONS.
PROC. MEM. LECT. MEET. ANNIV. FOUND. NAT. RES. INST. METALS, 10TH, TOKYO, 199-201, 1966, (ENGLISH). METAL CHEMISTRY DIVISION, NATIONAL RESEARCH INSTITUTE OF METALS, TOKYO.

7106 ENGELMANN, C. * LOEUILLET, M.
PHOTON ACTIVATION FOR A NONDESTRUCTIVE DETERMINATION OF SMALL QUANTITIES OF OXYGEN IN VERY PURE SODIUM.
BULL. SOC. CHIM. FR., NO. 2, 680-683 (1969), (ENGLISH). DEPARTEMENT DE METALLURGIE CEN SACLAY.

7142 SCHRAMEL, P.
DETECTION OF OXYGEN IN METALS, ESPECIALLY STEEL, BY ACTIVATION ANALYSIS WITH 14.5 MEV NEUTRONS.
OESTERR. AKAD. WISS., MATH.-NATURWISS. KL., SITZUNGSBER. ABT. II, 174, NO. 8-10, 535-557 (1965). (GERMAN). INSTITUT FUR RADIUMFORSCHUNG.

7145 DOGE, H.G. * GROSSE-RUYKEN, H.
DETERMINATION OF IMPURITIES IN MOLYBDENUM AND TUNGSTEN BY ACTIVATION ANALYSIS.
ISOTOPENPRAXIS, 4, 262-268 (JULY 1968). (GERMAN). INSTITUT FUR METALLPHYSIK UND REINSTMETALLE, DRESDEN, DER DEUTSCHEN AKADEMIE DER WISSENSCHAFTEN ZU BERLIN, UND INSTITUT FUR ANORGANISCHE UND ANORGANISCH-TECHNISCHE CHEMIE DER TU DRESDEN.

7162 PARKER, J.L. * HOLM, D.M.
MEASUREMENT OF CARBON GRADIENT IN STAINLESS STEEL BY HE-3 ACTIVATION AND AUTORADIOGRAPHY.
LA-4008, 9P., APRIL 1968. (ENGLISH). LOS ALAMOS SCIENTIFIC LABORATORY, UNIVERSITY OF CALIFORNIA, LOS ALAMOS, NEW MEXICO.

7170 PLAKSIN, I.N. * STARCHIK, L.P. * TUSTANOVSKII, V.T.
DETERMINATION OF SILICON, IRON, AND MANGANESE IN FERROSILICON BY NEUTRON ACTIVATION ANALYSIS.
NAUCH. SOOBSHCH., INST. GORN. DELA, 29, 106-111 (1965). (RUSSIAN). RUSSIA.

7172 MAC ARTHUR, I.R. * MORRIS, D.F.C.
RADIOCHEMICAL METHODS FOR THE DETERMINATION OF TRACE ELEMENTS IN NICKEL ALLOYS. PART II. DETERMINATION OF CHLORINE, PHOSPHORUS AND SULPHUR.
METALLURGIA, LXXX, NO. 477, 37-42 (JULY 1969). (ENGLISH). DEPARTMENT OF CHEMISTRY, BRUNEL UNIVERSITY, LONDON.

7200 AMSEL, G. * DAVID, D. * BERANGER, G. * BOISOT, P. * DE GELAS, B. * LACOMBE, P.
NUCLEAR METHODS FOR DETERMINATION OF IMPURITIES ON THE SURFACE OF METALS.
J. NUCL. MATER., 29, 144-153 (FEBRUARY 1969). (FRENCH). LABORATOIRE DE PHYSIQUE, E.N.S., AND C.R.M., ECOLE DES MINES DE PARIS, PARIS, FRANCE.

7213 MOISEEV, L.I. * BLOKHIN, V.I. * BOGATYREV, V.K.
THE POSSIBILITY OF DETERMINING GASES IN METALS BY RADIOACTIVATION METHODS.
J. RADIOANAL. CHEM., USSR, 23, NO. 11, 1492-1497 (NOVEMBER 1968). (ENGLISH TRANSLATION). RUSSIA.

7214 KAREV, V.N. * DOLYA, G.P. * SIVOKON, N.V. * TUTUBALIN, A.I. * KHALIN, N.F. * ZADVORNYI, A.S.
NEUTRON ACTIVATION ANALYSIS DETERMINATION OF OXYGEN IN BERYLLIUM.
INDUSTRIAL LABORATORY, 34, NO. 12, 1724-1726 (DECEMBER 1968). (ENGLISH TRANSLATION). PHYSICS AND ENGINEERING INSTITUTE OF THE ACADEMY OF SCIENCES OF THE UKRAINIAN SSR, KHARKOV.

7230 DEBRUN, J.L. * BARRANDON, J.N. * ALBERT, P.
ACTIVATION ANALYSIS USING HE-4 AND HE-3 IONS.
DETERMINATION OF TRACE OXYGEN IN HIGH PURITY IRON,
NICKEL, AND CHROMIUM. STUDIES ON CARBON
DETERMINATION.
BULL. SOC. CHIM. FR., NO. 3, 1011-1016 (MARCH
1969). (FRENCH). LABORATOIRE D ANALYSE PAR
ACTIVATION DU CENTRE D ETUDES DE CHIMIE
METALLURGIQUE, CNRS, VITRY-SUR-SEINE.

7248 ROOK, H.L. * SCHWEIKERT, E.A.
ULTRATRACE DETERMINATION OF OXYGEN AND CARBON BY
CHARGED PARTICLE ACTIVATION ANALYSIS.
ANAL. CHEM., 41, NO. 7, 958-963 (1969).
(ENGLISH). ACTIVATION ANALYSIS RESEARCH
LABORATORY, TEXAS A AND M UNIVERSITY, COLLEGE
STATION, TEXAS.

7285 KONECNY, K. * VOBECKY, M. * JUNA, J.
NON-DESTRUCTIVE DETERMINATION OF BORON IN METALLIC
ALLOYS BY MEANS OF A NUCLEAR REACTION.
JAD. ENERG., 15, 128-130 (APRIL 1969). (CZECH).
USTAV JADERNEHO VYZKUMU CSAV, REZ.

7289 HOSTE, J. * SPEECKE, A. * DE SOETE, D.
DETERMINATION OF OXYGEN IN STEELS BY NEUTRON
ACTIVATION. I. PRINCIPLE OF THE METHOD AND
DESCRIPTION OF THE EQUIPMENT.
CNRM (CENT. NAT. RECH. MET.) MET. REP., NO. 13,
29-32 (DECEMBER 1967). (ENGLISH) (GERMAN AND
FRENCH SUMMARIES). UNIVERSITY OF GHENT.

7291 HANS, A. * TYOU, P. * LACOMBLE, M. * COLLETTE, F.
DETERMINATION OF OXYGEN IN STEELS BY NEUTRON
ACTIVATION. III. RESULTS OF THE EXPERIMENTS
CARRIED OUT IN THE FIRST HALF OF 1967 WITH THE
EQUIPMENT INSTALLED AT THE LD STEEL PLANT OF S.A.
COCKERILL-OUGREE-PROVIDENCE.
CNRM (CENT. NAT. RECH. MET.) MET. REP. NO. 13,
37-46 (DECEMBER 1967). (ENGLISH) (GERMAN AND
FRENCH SUMMARIES). COCKERILL-OUGREE-PROVIDENCE
AND C.N.R.M.

7307 SCHUSTER, E. * WOHLLEBEN, K.
DETERMINATION OF LIGHT ELEMENTS IN SILICON AND
SELENIUM BY ION ACTIVATION ANALYSIS.
Z. ANAL. CHEM., 245, NO. 4, 239-244 (1969).
(GERMAN) (ENGLISH SUMMARY). KERNTECHNISCHE
LABORATORIEN UND FORSCHUNGSLABORATORIUM ERLANGEN
DER SIEMENS A.G.

7330 MIYAGAWA, K. * SHIMURA, K. * ASAI, A. * NOMURA, E.
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APPLICATION OF A FAST NEUTRON ACTIVATION METHOD TO
THE CONTROL OF OXYGEN CONTENT IN IRON AND STEEL
MAKING PROCESS.
TETSU TO HAGANE, 55, 209-215 (FEBRUARY 1969).
(JAPANESE) (ENGLISH SUMMARY). FUJI IRON AND STEEL
CO., LTD., JAPAN.

7343 BERRY, L.
ACTIVATION DETERMINATION OF OXYGEN AND NITROGEN IN
SOLIDS. APPLICATION TO THE STUDY OF SURFACE
REACTIONS.
CEA-BIB-116, 25P., 1968. (FRENCH). COMMISSARIAT
A L ENERGIE ATOMIQUE, SACLAY, FRANCE.

7344 BIHET, O.L.
OXYGEN DETERMINATION IN STEEL BY NEUTRON
ACTIVATION.
STAHL EISEN, 88, 1244-1246 (OCTOBER 31, 1968).
(GERMAN). GERMANY.

7361 JUNA, J. * KONECNY, K. * VOBECKY, M.
NUCLEAR REACTION METHOD FOR THE DETERMINATION OF
BORON.
COLLECT. CZECH. CHEM. COMMUN., 1605-1611 (MAY
1969). (ENGLISH). NUCLEAR RESEARCH INSTITUTE,
CZECHOSLOVAK ACADEMY OF SCIENCES, PRAGUE-REZ,
CZECHOSLOVAKIA.

7387 JANCZYSZYN, J. * LOSKA, L. * TACZANOWSKI, S.
DETERMINATION OF OXYGEN IN METALLIC COPPER BY FAST
NEUTRON ACTIVATION ANALYSIS.
CHEMIA ANALITYCZNA, 14, 391-396 (1969). (POLISH)
(ENGLISH SUMMARY). INSTYTUT TECHNIKI JADROWEJ
AKADEMII GORNICZO-HUTNICZEJ, KRAKOW, POLAND.

7407 ATALLA, L.T. * LIMA, F.W.
THE DETERMINATION OF IMPURITIES IN MAGNESIUM METAL
BY ACTIVATION ANALYSIS.
IEA NO. 167, 23P., JUNE 1968. (SPANISH). DIVISAO
DE RADIOQUIMICA, INSTITUTO DE ENERGIA ATOMICA, SAO
PAULO, BRAZIL.

7417 GUINN, V.P.
IN-SITU MEASUREMENT OF OXYGEN IN WELDS BY
NONDESTRUCTIVE NEUTRON ACTIVATION ANALYSIS.
PROCEEDINGS 1968 SYMPOSIUM ON THE NDT OF WELDS AND
MATERIALS JOINING, EVANSTON, ILLINOIS, THE
AMERICAN SOCIETY FOR NON-DESTRUCTIVE TESTING,
INC., 547-556, 1968, (ENGLISH). GULF GENERAL
ATOMIC INC., SAN DIEGO, CALIF.

7419 STOLL, N. * WAGNER, A. * GOEDERT, L.
APPLICATION OF ACTIVATION ANALYSIS FOR
DETERMINATION OF OXYGEN IN STEEL.
STAHL EISEN, 88, 775-782 (JULY 11, 1968), (GERMAN
AND FRENCH). GERMANY.

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- BORON 1816
- CALCIUM 1816
- CESIUM 4386
- GERMANIUM 1604 6752 7015
- GOLD 105 1599 1831 7011
- IRON 4 8 401 417 703 744 1219 5954 7015 7018
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- NICKEL 1604 6593 6752
- NIOBIUM 7015
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- SILVER 105
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- STEEL 118 119 351 1026 1604 1951 2652 5238 6742 6752 7162

CARBON (CONTINUED)

TANTALUM 1604 3977 6752 7015
TERBIUM 4226
TUNGSTEN 3070
ZIRCONIUM 703 1604 6752

NITROGEN

ALUMINUM 703
BERYLLIUM 49 703 1263 1816 2505 3070 3976
IRON 7015
METALS, GENERAL 5238 7213 7343
MOLYBDENUM 3070
NIOBIUM 5782 7015
SILICON 7019
TUNGSTEN 3070
ZIRCONIUM 703 760

OXYGEN

ALUMINUM 578 654 655 1067 1589 1804 3721 3722 3771 3992 4211 5409 5432 5772 5921 6595 6694 6978 7012
AMERICIUM 4226
BERYLLIUM 45 46 49 58 108 109 391 500 578 596 814 1103 1104 1263 1318 1816 2505 2549 2686 3070 3073 3090 3727 3976 4277 7097 7214
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BORON 1816 4260
CADMIUM 5772
CALCIUM 1816
CERIUM 500
CESIUM 131 4386
CHROMIUM 500 3090 6591 7230

OXYGEN (CONTINUED)

- COBALT 5772
- COPPER 655 1067 1103 3768 5772 7387
- CURIUM 4226
- GERMANIUM 1604 1739 6053 6072 6752
- GOLD 105 655 1831 7011
- HAFNIUM 2381 5938 6590
- IRON 426 655 1067 1589 2649 3768 6591 7015 7230 7330
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OXYGEN (CONTINUED)

STEEL 426 500 1067 1103 1394 1453 1604 1950 1956 2507 2526 2542 2586 2615 2649 2678 2764 2983 3357 3502 3746 3768 3981 5238 5380 5450 5451 5452 5708 5772 6595 6728 6752 6856 7076 7142 7289 7291 7330 7344 7419

TANTALUM 912 1067 1604 3090 3977 5772 6752

TERBIUM 4226

THORIUM 105 1318 1730

TIN 500

TITANIUM 426 1067 1103 1739 3357 3981 4277 5431 5772 5781 6750

TUNGSTEN 500 1067 2381 3070 3768 5938 6590

VANADIUM 500

ZINC 5772

ZIRCALLOY 426 1067 1309 3768

ZIRCONIUM 655 762 1103 1604 2381 3090 3721 4277 5772 5938 6590 6595 6752 7012 7200

PHOSPHOROUS

ALUMINUM 4 161 398 688 767 979 2550 6410

ALUMINUM-SILICON ALLOYS 864

ANTIMONY 985 2721

COPPER 1477 2550 6412

GALLIUM 2721

GOLD 1193

IRON 4 140 223 688 767 893 1965 6568

MAGNESIUM 22 6410

MOLYBDENUM 7145

NICKEL 892 6568

NICKEL ALLOYS 7172

PHOSPHOROUS (CONTINUED)

NIOBIUM	641 1165 1709
SELENIUM	1215 1520 6446
SILICON	244 246 255 509 892 1118 1166 2386 2523 6226 6572
STEEL	893 1085 1124 2764 6086
TANTALUM	1165
TELLURIUM	1215
THALLIUM	2721
TUNGSTEN	7145
ZIRCONIUM	1471 1709 2550

SILICON

ALUMINUM	4 102 417 1591
BERYLLIUM	850 1263
IRON	4 452 628 1590 1875
MAGNESIUM	7407
NICKEL ALLOYS	6844
NIOBIUM	641
STEEL	628 2429 2596 6086 6398 6723 7170
TITANIUM	81
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SULFUR

ALUMINUM	688 704 767 2550 6410 6412 6568
CHROMIUM	1570
COPPER	1378 1477 2550 6410 6412 6568
GOLD	1193
IRON	140 688 767 1621 1965 6410 6412 6568
MAGNESIUM	22 6410 6412 6568
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$^{11}B(p,n)^{11}C$	181 1013 1091 2712
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$^{10}B(n,\alpha)^{7}Li$ - electronic α counting	1546 1547 1561 1618 1787 3059 3361 5429
$^{10}B(n,\alpha)^{7}Li$ - α track counting	5408 5932
$^{10}B(n,\alpha)^{7}Li$ - neutron flux depression	1821
$^{10}B(n,\alpha)^{7}Li$ - prompt ^{7}Li gamma ray	1546 1547 1561 3361 3466 5919 7285 7361
Deuteron bombardment - prompt gamma ray	3976

CARBON

$^{12}C(d,n)^{13}N$	4 8 118 119 417 688 744 767 1219 1951 2505 3070 3976 5238 6581 6736 7307
$^{12}C(\gamma,n)^{11}C$	45 46 49 351 703 1263 1560 1816 3727 4386 5954 6593 6742 7015 7017 7018
$^{12}C(^{3}He,\alpha)^{11}C$	105 1599 1604 1831 3977 4226 6752 7011 7019 7162
$^{12}C(p,\gamma)^{13}N$	401 744 1026 1219
$^{12}C(\alpha,\alpha n)^{11}C$	578
$^{12}C(d,p)^{13}C$ - (prompt γ detection)	2652

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NITROGEN

$^{14}N(\gamma,n)^{13}N$	49 703 760 1263 1816 7015
$^{14}N(d,n)^{15}O$	2505 3070 3976
$^{14}N(d,n)$ - prompt neutron detection	5238
$^{14}N(n,2n)$ - C-W generator	5782
$^{14}N(p,\alpha)^{11}C$	7019

OXYGEN

$^{16}O(n,p)^{16}N$ - 14 MeV neutrons from Cockcroft Walton generator	108 109 131 426 500 596 762 1067 1103 1104 1309 1394 1453 1589 1739 1804 1900 1950 1956 2418 2505 2507 2526 2542 2549 2586 2598 2615 2649 2678 2686 2734 2764 2798 2802 2983 3073 3085 3090 3357 3502 3746 3768 3981 4260 5321 5380 5409 5431 5432 5451 5452 5708 5772 5781 6694 6705 6728 6750 6856 6978 7076 7097 7142 7214 7289 7291 7330 7344 7387 7417 7419
$^{16}O(\alpha,pn)^{18}F$	578 1151 1194 1742 2381 3722 5921 5938 6590 6591 6593 7015 7230 7248
$^{18}O(p,n)^{18}F$	912 1483
$^{18}O(\gamma,p)^{17}N$	4277
$^{16}O(t,n)^{18}F$ - accelerator produced tritons	7012
$^{16}O(n,p)^{16}N$ - reactor neutrons	3986
$^{16}O(d,n)^{17}F$	3070 3976 5238 7307
$^{16}O(d;p)^{17}O$ - prompt γ's	6595
$^{16}O(p,\alpha)^{13}N$	7248

OXYGEN (Continued)

$^{16}O(\gamma,n)^{15}O$	45 46 49 58 814 1263 1816 3727 3771 4386 6742 7015 7017 7106
$^{16}O(^{3}He,p)^{18}F$	105 1318 1604 1831 2381 3721 3977 4211 4226 5921 5938 6053 6072 6590 6752 7011 7015 7019 7230 7248
$^{16}O(t,n)^{18}F$; tritons from $^{6}Li(n,\alpha)t$	391 654 655 1158 1730 2562 3992

PHOSPHOROUS

$^{31}P(n,\gamma)^{32}P$	4 22 140 161 223 244 246 255 398 509 641 688 767 864 892 893 979 985 1085 1118 1124 1165 1166 1193 1215 1471 1477 1520 1709 2386 2523 2550 2721 2764 6086 6226 6410 6412 6446 6568 6572 7145 7172

SILICON

proton scattering	2429
$^{28}Si(n,\gamma)^{29}Si$	4 81 102 417 452 641 850 1263 1709 6086 7407
$^{28}Si(n,p)^{28}Al$ - C-W Generator	628 1875 2596 6398 6723 6844 7170
$^{28}Si(n,p)^{28}Al$ - Po-Be source	1590 1591

SULFUR

$^{34}S(n,\gamma)^{35}S$	22 140 641 688 767 892 893 1085 1124 1193 1215 1378 1471 1477 1520 1621 1711 2550 6086 6410 6446 6568
$^{32}S(n,p)^{32}P$	704 1520 1570 1709 1965 2764 4300 6412 6446 6568 7172

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